

# INDEX

- AA (R. van der), "Papuan and Melanesians," 16  
D'Abbadie (Antoine), Time—Thunderbolts—Vision—Sunglows, 29  
Abdank-Abakanowicz, a New Integrator, 519  
Abercromby (Hon. Ralph), Upper Wind Currents over the Equator, 624  
Aberdeen, on the Occurrence of *Lumpeus lampeiriformis* and *Gadiculus argenteus* off, Francis Day, 223  
Aberdeen, Meeting of the British Association at, 437  
Aberystwith, Fire at University College of Wales at, 254  
Abney (Capt.), Lecture Experiments on Colour Mixtures, 263  
Abnormal Development: Dr. J. G. Garson on Abnormal and Arrested Development as an Induction of Evolutionary History, 589  
Aboriginals, the "Sakeis" of the Malay Peninsula, 428  
Abstract Science, Sir Lyon Playfair on, 445  
Academy, the Uses of an, 608  
Academy of Science in Indiana, Proposed State, 633  
Acland (Right Hon. Sir Thomas), Review of Agricultural Experiments by the, 362  
Acta Mathematica, 302  
Actinic, on the Chromatology of, Dr. McMunn, 68  
Aéronautics: Proposed Aeronautical Exhibition, 111; Aeronautical Society of Great Britain, 111; Gower's Experiments in Aerial Navigation, 133; Supposed Loss of Mr. F. A. Gower, 329. See also Balloons.  
Afghan Boundary Commission, Botany of the, 35  
Afghan Delimitation Commission, 164; Dr. J. E. P. Aitchison, F.R.S., 226  
Afghanistan, the Electric Light in, 134  
Africa: Proposal for Systematisation of Scientific Observation in, Dr. Habenicht, 64; Discovery by Major Serpa Pinto of Coal-Fields in, 164; Projected New African Expedition (Geographical Society), 184; Exploration of the Mobangi River, 281; Proposed New Political Map of, 356; Buonfanti's Journey Across, 357; Dr. Oscar Lenz's Expedition, 357; the Dutch African Expedition, 403; Portuguese Explorations in, 429; the African Natural History Collections of Dr. Nachtigal, 493; Rumoured Massacre of Massari's Italian African Expedition, 493; Discovery by Lieut. Weissmann of Fall of Kassai River into Lake Leopold II., 495; Exploration of Kilimanjaro, 530; Weissmann's Exploration of the Kassai River, 581; Manners and Customs of the Bantu Tribes, 589  
"After-Glows," 239  
After-Images: on Certain Stages of Ocular, H. Frank Newa 77; Ocular Images and, W. M. Lawin, 197; Ocular, an Lightning, Shelford Bidwell, 101; A. S. Davis, 126  
After-Sunglow at Stockholm, 635  
Agamemnone (Dr.), Experiments on Density of Gases and Air, 48  
Agricultural Experiments by the Right Hon. Sir Thomas Dyke Acland, 362  
"Agricultural Grasses of the United States," Dr. Geo. Vasey, Prof. W. Fream, 525  
Agricultural Note-Book, W. C. Taylor, 623  
Air, Dr. Agamemnone's Experiments on Density of, 47  
Airy (Hubert), a White Swallow, 523  
Aitchison (Dr. J. E. T., F.R.S.), Afghan Delimitation Commission, 226  
Alaska Glacier, Movement of, 162  
Albania, on the Flint-Knappers' Art in, A. J. Evans, F.S.A., 588  
Albanian Coast, Austrian Geographical Survey of, 403  
Aldebaran: Daylight-Occultation of, on May 22, 1868, 86; on July 9, 1885, 183; Occultation of, on November 22, 610  
Alert Expedition to Hudson's Bay, 114; Return of the, 611  
Algæ, Text-Books on, 101  
Algebra for Schools, Elementary, H. S. Hall and S. R. Knight, 388  
Algebra, Lessons Introductory to the Modern Higher, George Salmon, 411  
Algiers, Proposed Use of Electric Light for Night-work at Harvest, 162  
Algol, Minima of, 86  
Algology of the Black Sea, Reinhardt, 579  
Allen (Alfred H.), "Commercial Organic Analysis," 410  
Allen (F. J.), "Specielle Physiologie des Embryo," W. Preyer, 267  
Alluard (M.), the Role of Wind in Fertilisation, 134  
Alphabet, Greek, found in Italy, Signor Barnabei, 120  
Alpine and Arctic Animals, Colours of, Lorenzo Camerano, 77; Prof. R. Meldola, 172  
Alpine Clubs, Congress of, at Turin, 460  
Alsace, Waterspout in, 134  
Alums, on the Specific Refraction and Dispersion of the, Dr. J. H. Gladstone, 263  
America: American Journal of Science, 67, 116, 358, 567; Was Iron known in America before Columbus?, 110; American Naturalist, 116, 568, 591; American Meteorological Jour-

- nal, 181; Meeting of American Association at Ann Arbor, 207, 374, 510; Electricity at, 207; Excursions, 207; American Earthquakes, C. G. Rookwood, 300; American Journal of Mathematics, Pure and Applied, 364; Geology in America, 374; American Ornithologists' Union, 401, 461; American Philosophical Society, 402; the Primitive Peoples of America, Alexander von Humboldt, 464; Mr. Lehmann's Researches into the Flora of Tropical America, 514; Chemical Composition of American Grasses, Clifford Richardson, Prof. W. Frearm, 525; H. F. C. Ten Kate, "Reizen en Onderzoekingen in Noord-Amerika," Prof. E. B. Tylor, F.R.S., 593; Prehistoric America, Marquis de Nadaillac, Dr. E. B. Tylor, F.R.S., 593; Two Early Italian Adventurers in South America, 376
- Ammonia from Blast-Furnaces fed with Raw Coal, the Recovery of, Wm. Jones, 430
- Amour, Proposed Russian Scientific Expedition to, 495
- Anæsthesia unattended with Sleep, M. Brown-Sequard, 144
- Anæsthetic, Mediæval, Lagneau, 301
- Analcite Crystals, S. L. Penfold, 554
- Analysis, Commercial Organic, Alfred H. Allen, 410
- Anatomical Method, Application of, to the Determination of the Materials of the Linnean and Old Herbaria, Prof. L. Radlkofer, 563
- Anatomy, Dr. Dudgeon's Chinese Translation of Gray's, 514
- Anatomy and Physiology, Comparative, F. Jeffrey Bell, 569
- Ancestors, Our, 317, 343
- Andalusian Earthquakes, on the Causes of the, A. Rzehak, 133
- Andaman Islands, Aboriginal Inhabitants of the, Edward Horace Mann and A. J. Ellis, F.R.S., 409
- Anderson (Alex.), a White Swallow, 523
- Andreau on the Prairies of Guiana, 164
- Andrée (Dr.), Was Iron known in America before Columbus?, 110
- Andrena* (Wild Bees), a Colony of, 6
- Andromeda, Nebula in, Lord Rosse, F.R.S., 437; the New Star in, 460, 465; Lord Rosse, F.R.S., 465; Dr. William Huggins, F.R.S., 465; W. F. Denning, 465; J. Edmund Clark, 499; A. A. Common, F.R.S., 522; Geo. M. Seabroke, 523; A. Ricco, 523; Dr. Sophus Tromholt, 579
- Andrusoff, Geology of the Kertch Peninsula, 580
- Anemogene, Mgr. Rougerie, Bishop of Pamier, the, 519
- Animal Parasites of the Sugar Cane, H. Sing Roth, 268
- Animals: the Locomotion of, Dr. Mullenhoff, 496; Colours of Arctic and Alpine, Lorenzo Camerano, 77; Prof. R. Meldola, 172
- Annalen der Physik und Chemie, 44, 309, 518
- Annual Congress of the Sanitary Institute of Great Britain, 523
- Annual Report of the Fishery Board for Scotland, 1884, 281
- Antarctic Discovery, Admiral Sir Erasmus Ommanney, F.R.S., 505
- Anthelm's Nova of 1670, 355
- Anthony's (Prof.) Tangent Galvanometer, 634
- Anthropology, 85, 168; Anthropological Institute, 46, 93, 168, 216; Anthropological Society of Vienna, 110; Summary of Anthropology for 1884, 355; Criminal Anthropology, 375; the Races of Brazil, 408; M. de Mortillet on Tertiary Man, 494; Opening Address by Francis Galton, F.R.S., in Section H at the British Association, 507; Prof. W. Turner, on the Index of the Pelvic Brim as a Basis of Classification, 586; W. F. Stanley, on a Portable Scale of Proportions of the Human Body, 586; J. Theodore Bent, on Insular Greek Customs, 587; Gen. Pitt-Rivers, on the Preservation of Ancient Monuments, 587; Miss A. W. Buckland, on American Shell-Work and its Affinities, 587; E. F. im Thurn, on the Red Men about Roraima in British Guiana, 587; J. W. Crombie, on a Game with a History, 587; George Campbell, on the Rule of the Road from an Anthropological Point of View, 587; Jeanie M. Laing, on the Modes of Grinding and Drying Corn in Old Times, 587; A. J. Evans, on the Flint-Knappers' Art in Albania, 588; W. M. Flinders Petrie, on the Discovery of Naukratis, 588; Thomas Wilson, on a New Man of Mentone, 588; Dr. R. Munro, on the Archaeological Importance of Ancient British Lake Dwellings, and their Relation to Analogous Remains in Europe, 588; Prof. D. J. Cunningham, on Certain Points of Comparison between the Chimpanzee and Man, 588; Dr. J. G. Garson, on Abnormal and Arrested Development as an Induction of Evolutionary History, 589; Dr. Robert Laws, on the Manners and Customs of the Bantu Tribes of Lake Nyassa, 589; E. H. Man, on the Nicobar Islanders, 589; American Anthropology, Dr. E. B. Tylor, F.R.S., 593; Anthropometric Instruction for Travellers, Dr. P. Topinard, 615
- Anti-Cholera Inoculations of Dr. Ferran, Dr. E. Klein, F.R.S., 617
- Antigua, Geology of, Purves, 553
- Antiquities of the Isle of Man, Prof. Boyd Dawkins, 579
- Ants at Solothurn, Enormous Swarms of, 515
- Antwerp International Botanical and Horticultural Congress, 182; Prof. W. R. McNab, F.R.S., 416
- Aonest (Violet d'), Meteoric Formations in Mexico, 376
- April Meteors, W. F. Denning, 5
- Aquarium at the Inventions Exhibition, the, 36; Re-stocking of the, 541; Additions to, 634
- Aquatic Animals, Life of, at High Pressure, 399
- Arabia, Glaser's Exploration of, 88, 233
- Arago (François), Centenary of Birth of, 401
- "Araucana," the Historical Value of the, H. Polakowsky, 429
- Archæology in India, 634
- Archer (M.), "William Hedley, the Inventor of Railway Locomotion on the Present Principle," 595
- Archer (T. A.), Prehistoric Burial-Grounds, 548
- Archer, on Silk Culture in Siam, 611
- Archibald (E. Douglas), Eleven-Year Meridional Oscillation of the Auroral Zone, 414
- Archiv für die Naturwissenschaftliche Landesdurchforschung von Böhmen, 113
- Arctic Exploration, Return of the *Alert*, 611
- Arctic and Alpine Animals, Colours of, Lorenzo Camerano, 77; Prof. R. Meldola, 172
- Argyll (Duke of), Iona, 413
- Armstrong (G. F.), Appointed Professor of Engineering at Edinburgh, 426
- Armstrong (Prof. H. E., F.R.S.), Opening Address in Section B (Chemical Science) at the British Association, 449, 467
- Armstrong (H. E.), A. K. Miller on the Products of Gas Manufacture from Petroleum, 286
- Arnett (Braithwaite), Euclid, Book I., 221
- Aromatic Series, Thermic Studies of the, Berthelot, 592
- Aronsohn (Prof.), Physiology of the Sense of Smell, 520
- Artesian Well in the Sahara, the, 110
- Artificial Earthquakes, 114; T. C. Lewis, 295
- Aryas, the European Origin of the, M. van den Gheyn, 114
- Asia (Central), the New Route to, M. Belavsky, 113
- Asia (Eastern), Rainy Summer in, 461
- Asiatic Birds, Hume Collection of, Dr. Albert Günther, F.R.S., 500
- Asiatic Cholera, Case of, at Cardiff, 460
- Asiatic Society of Bengal, Centenary of, 427
- Asiatic Society of Japan, 110
- Astronomy: Our Astronomical Column, 13, 37, 86, 112, 162, 183, 231, 280, 301, 355, 402, 553, 610, 636; Astronomical Phenomena for the Week, 14, 38, 65, 86, 113, 134, 162, 183, 209, 232, 255, 281, 301, 330, 356, 377, 403, 428, 463, 495, 516, 542, 554, 581, 611, 636; McCormick Observatory, 13; the Floating Telescope Dome for Nice Observatory, 62; Prof. Zinger on the Determination of Time by Corresponding Heights of Different Stars, 63; the Proposed Change in Time for beginning the Astronomical Day, 132; Popular Education in Astronomy at Christiania, 133; the Question of Civil and Astronomical Time, 245; Belgian Observations of the Transit of Venus in 1882, 254; the Heliometer, 329; Astronomische Gesellschaft, 278, 280; Astronomical and Meteorological Observatories at Pekin, 403; Astronomy in the United States, 460; "Practical Astronomy," Prof. Doolittle, 462; Astronomical Notes, 464; Closing of Beloit College (Wisconsin) Observatory, 514; Astronomical Association, 516; Prof. Weiss on the Present State of Computations of Orbits of Comets, 516; Proposed Change in the Astronomical Day, 523
- Atmospheric Notes, 610
- Atavism in Man, Dr. R. Blanchard, 615
- Atlantic, Chart of Ice in, 302
- Atlas of Practical Elementary Biology, G. B. Howes, 388
- Atmosphere, Sunlight and the Earth's, S. P. Langley, 17, 40
- Atmospheric Air, Extraction of Oxygen and Nitrogen from, 354
- Atmospheric Phenomenon, Unusual, Alex. Hodgkinson, 173
- Atmospheric Phenomenon in Switzerland, a Remarkable, Prof. Calladon, 426

- Atomic Refraction of Sulphur in various Compounds, Nasini, 87  
 August Meteors, H. B. Jupp, 342; W. F. Denning, 415  
 "Auk," the, 461  
 Aulénine, the, R. von Lendenfeld, 639  
 Aurora, the, Prof. J. P. O'Reilly, 54; S. Tromholt, 274, 348; of March 15, 1885, Prof. E. E. Barnard, 78  
 Aurora Borealis, Photographing the, Carl Siewers, 29; a Note Relating to the History of the, Dr. Sophus Tromholt, 89  
 Aurora-Sound, Norwegian Testimony to the, Dr. Sophus Tromholt, 499; Value of the Testimony to the, Samuel Sexton, 625  
 Auroral Zone, Eleven-Year Meridional Oscillation of the, E. Douglas Archibald, 414  
 Australia: Prof. Auwers' Calculations of Longitude of Places in, 64; the Glacial Period in, Dr. R. von Lendenfeld, 69; the Supposed Glacial Epoch in, Capt. Hutton, 640; on the Rising of the Eastern Coast of, H. C. Russell, 234; Linnean Society of New South Wales, 238; Australian Expedition to New Guinea, 356, 403; Botany in South Australia, 462; Cultivation of Useful Plants in South Australia, 462; the Australian Sponges, R. von Lendenfeld, 639  
 Austria: Earthquakes in, 11, 85, 460; Industrial Education in, 63; Terrible Snowstorm in, 62; Austrian Alpine Tourist Club, 134; the Temperature of the Austrian Alps, Dr. Hann, 580; Austrian Geographical Survey of Albanian Coast, 403; the Austrian Tourist Club, 88  
 Auwers (Prof.), Calculations of Longitude of Places in Australia, 64  
 Avalanche in Iceland, 230  
 Axes, Stone, Perak, A. Hall, 626  
 Ayrtton (Prof. W. E., F.R.S.), Transmission of Sound, 575  
 Ayrtton and Perry (Profs.), on the Winding of Voltmeters, 215  
 Azambuya (Graciano A.), Singular Case of Mimicry, 366  
 Bacillary Phthisis of the Lungs, Germain Sée, 341  
 Bacteria, Prof. Brieger on the Ptomaines, 239  
 Bacteriology: the Flora of Bank-Notes, 8  
 Baeyer (Gen. J. J.), Death of, 578  
 Bagshot Strata, a General Section of the, Rev. A. Irving, 23  
 Bailey (Major F.), the Indian Forest School, 564  
 Baird (Major A. W.), on Levelling Operations of the Great Trigonometrical Survey of India, 536  
 Baird (Prof. S. F.), "Water-Birds of North America," 521  
 Baker (Benjamin), Forth Bridge, 430  
 Baker (B.), Opening Address in Section G (Mechanical Science) at the British Association, 488  
 Baker (H. B.), Combustion of Phosphorus and Carbon in Oxygen, 87  
 Baker (J. G., F.R.S.), "Flora of the English Lake District," 75  
 Baker (W. G.), Magnetism and Electricity, 340  
 Baldness among Orientals, Herr Schweiger, 36  
 Ballooning: Centennial Celebration of Blanchard and Jeffries crossing the Channel in Balloon, 85; Balloon Ascent for Photographic Purposes, Gaston Tissandier, 182; Proposed Air-Balloon Railway on the Gaisberg, 254; Application of Electric Lighting to Balloons, 278; Balloon Photography (*see also* Aeronautics), 420  
 Baltic, Mirage in the, 112; Recent Rapid Elevation of Shores of, 302  
 Bamboo, the Square, W. T. Thiselton Dyer, F.R.S., 391  
 Bank-Notes, the Flora of, 8  
 Banner System of Drainage, Banner Brothers and Co., 272  
 Bantu Tribes, Dr. Robert Laws on the Manners and Customs of the, 589  
 Barium Sulphate, Prof. Frank Clowes on, as a Cementing Material in Sandstone, 555  
 Barius (Dr.), Death of, 181  
 Barley-growing, successfully attempted in Iceland, 494  
 Barlow (Peter Wm.), Death of, 84  
 Barnabei (Signor), a Greek Alphabet found in Italy, 120  
 Barnaby (Sir Nathaniel), Resignation of the Directorship of Naval Construction, 374  
 Barnard (Prof. E. E.), Aurora of March 15, 1885, 78  
 Barnard's Comet, 83, 301, 359  
 Barograph, the Markings during Thunderstorms of the, Dr. Less, 72  
 Barometric Variations, Forecasting of, A. N. Pearson, 574  
 Barrett (Jerry), Monkeys and Water, 367  
 Barrett (Prof. W. F.), on a New and Simple Form of Calorimeter, 538  
 Bart (Teisserenc de), Sahara Expedition, 164  
 Bartoli, the Mean Density of a Body combining all known Elements in a Solid State, 635  
 Basins, Great Ocean, John Murray, 581, 611  
 Bass (Black), at Inventions Exhibition, 375  
 Bastite-Serpentine, Prof. T. G. Bonney, F.R.S., on, in Aberdeenshire, 556  
 Bat, a New Frugivorous, 374  
 Bath Natural History and Antiquarian Field Club, 12  
 Batho-Hypsographical Maps, with Special Reference to a Combination of the Ordnance and Admiralty Surveys, E. G. Ravenstein, 565  
 Batters (Edw.), Notes on Marine Algae, 101  
 Bayne (Dr. H. A.), the Analysis of Silk, 258  
 Baynes (Robert E.), Nomenclature in Elasticity, 316  
 Bedford College for Ladies, 278  
 Bedfordshire Natural History Society, 182  
 Bees, Wild, E. Brown, 6  
 Behrens (Dr. W. J.), "Guide for the Microscopical Investigation of Vegetable Substances," 193; Text-Book of General Botany, 193  
 Belavsky (M.), the New Route to Central Asia, 113  
 Belgian Observations of the Transit of Venus in 1882, 254  
 Belgian Royal Society of Public Medicine, 299  
 Belgium, Geological Survey of, 154, 199; Dr. A. Geikie, F.R.S., 597  
 Belgium, *Bulletin* of Royal Geographical Society of, 299, 356  
 Belgium, Proposed Excursion of the Geologists' Association to, 298  
 Bell (Prof. Alex. Graham), Preventing Collisions with Icebergs in a Fog, 273  
 Bell (Dugald), Among the Rocks round Glasgow, 624  
 Bell (F. Jeffery), Comparative Anatomy and Physiology, 569  
 Bell (I. Lowthian), on the Blast-Furnace Value of Coke, 39; Baronetcy Conferred on, 207  
 Ben Nevis Meteorological Station, 17, 54, 61, 252; Meteorological Observations on, 529; on the Meteorology of, A. Buchan, 536  
 Benda's (Dr.), Preparations of Sensory and Motory Nerve-Endings, 520  
 Benevento, Earthquake at, 515  
 Bengal, Proposed Government Inquiry into Castes and Occupations of People of, 36; Earthquake in, 279, 300; Century of Science in, 638  
 Bennett (A. W.), Flora of Canada, 294  
 Bent (J. Theodore), on Insular Greek Customs, 587  
 Bentham (George), Memorial Portrait of the Late, 513  
 Berdoe (Edward Robert), Browning as a Scientific Poet, 36  
 Bergen, Unprecedentedly Early Appearance of Floating Ice off Coast of, 515; Formation of Society for the Advancement of Science at, 580  
 Berlin: Physiological Society, 24, 71, 119, 191, 239, 330, 496, 519, 544; Physical Society, 72, 95, 160, 311; Geographical Society of, 209; Meteorological Society, 239; International Geological Congress at, 278, 551; International Telegraph Conference at, 353  
 Bias, Unconscious, in Walking, Manly Miles, 293  
 Biaxial Crystals, on Cases of the Production of Ohm's (or Langberg's) Ellipses by, H. G. Madan, 414  
 Bidwell (Shelford): on Certain Spectral Images Produced by a Rotating Vacuum Tube, 30; the Changes Produced by Magnetisation in Length of Metal Rods, 45; Ocular After-Images and Lightning, 101; Variations Caused by Magnetisation in Metal Rods, 167; the Action of Light in Diminishing the Electrical Resistance of Selenium, 167; Experiments with Sulphur Cells, 263; Solid Electrolytes, 391; Voltaic Cell with a Solid Electrolyte, 345  
 Binary Stars, 162; 70 Ophiuchi, 402  
 Bingham (Chas.), Nesting of *Micropternus phaeocephs*, 52  
 Biology: Professorship of, at Madras, 181; the Marine Biological Association, 278; Station at Christiania, 280; an Atlas of Practical Elementary Biology, G. B. Howes, 388; Address on, at the British Association, Prof. W. C. McIntosh, LL.D., F.R.S., 476; Prof. Edward Hull, F.R.S., on the Cause of the Extreme Dissimilarity between the Faunas of the Red Sea and the Mediterranean, notwithstanding their

- Recent Connection, 560; Prof. Struthers, on the Tay Whale (*Megaptera longimana*) and other Whales Recently Obtained in the District, 560; Prof. Turner, on Some Points in the Anatomy of Sowerby's Whale, 560; Prof. Struthers, on the Cervical Vertebrae of the Greenland Right Whale, 560; Prof. Struthers, on the Development of the Vertebrae of the Elephant, 560; Prof. Struthers, on the Development of the Foot of the Horse, 560; Prof. Cleland, on the Viscera of *Gymnotus electricus*, 561; Prof. Cleland, on the Spiracle of Fishes in its Relation to the Head, as Developed in the Higher Vertebrates, 561; D. J. Hamilton, Is the Commissural Theory of the Corpus Callosum Correct?, 561; Alex. Hill, on the Evidence of Comparative Anatomy with regard to Localisation of Function in the Cortex of the Brain, 561; Prof. McKendrick, on the Action of Cold on Microphytes, 561; J. J. Coleman, on the Action of Ozonised Air upon Micro-Organisms and Albumen in Solution, 561; Prof. Bower, on the Use of Graphic Representations of Life-Histories in the Teaching of Botany, 562; Prof. J. Berry Haycraft, on a New Theory of the Sense of Taste, 562; Francis Day, on the Hybridisation of Salmonidae at Howietoun, 562; A. Hosie, on Chinese Insect White Wax, 562; Prof. O. C. Marsh, on the Size of the Brain in Extinct Animals, 562; D'Arcy W. Thompson, on the Systematic Position of the Chameleon and its Affinities with the Dinosauria, 562; Prof. Hall, on the Origin of the Fishes of the Sea of Galilee, 563; Prof. McIntosh, on the St. Andrews Marine Laboratory, 563; Dr. Oscar Loew, on a Chemical Difference between Living and Dead Protoplasm, 563; Sidney Martin, on the Digestion of Proteids in Plants, 563; Prof. L. Radlkofer, on the Application of the Anatomical Method to the Determination of the Materials of the Linnean and Old Herbaria, 563; M. Ward, Notes on Experiments as to the Formation of Starch in Plants under the Influence of the Electric Light, 563; Allen Harker, on the Coloration of the Anterior Segments of the Maldanidae, 564; Proposed Marine Stations on the Coast of the United Kingdom, 566
- Biondi (Prof.), Investigations on the Origin of the Spermatozooids, 544
- Bird, the New, in Natal, J. E. Harting, 6
- Birds, Wingless, Dr. H. Woodward, F.R.S., 46
- "Birds of Lancashire," F. S. Mitchell, 241
- Birds, Migratory, Early Departure from Sweden of, 427
- Birds, Asiatic, Hume Collection of, Dr. Albert Günther, F.R.S., 500
- Birds, on the Development of the Sternum in, Miss B. Lindsay, 540
- Birkbeck Institution, Opening of New Buildings, 230
- Bischoffsheim's Floating Telescope Dome for Nice Observatory, 62
- Bi-sulphide, Carbon, in Prisms, on the Use of, Experiments by the late Dr. Henry Draper, 272
- Bituminous Deposits of the Camama Basin of Bahia, Report on the, Cameron, 182
- Black (Dr. W. I.), Ozone at Sea, 416
- Black Dog (the Rock), Prof. T. G. Bonney, F.R.S., on Bastite-Serpentine and Troktolite in Aberdeenshire; with a Note on the Rock of the Black Dog, 556
- Black Sea, Algology of the, Reinhardt, 570
- Black and White, Col. Wm. E. Warrand, 245
- Blackfoot Tribes, Report on, 531
- Blanchard (Dr. R.), Atavism in Man, 615
- Blanford (W. T., F.R.S.), Zoology of Dr. Riebeck's "Chittagong Hill Tribes"—the Gayal and Gaur, 243
- Baschko (Dr.), Sensitiveness of Hair, 24; Microscopic Preparation showing Absence of Cementing Substance between Epidermis and Cutis, 544
- Blast Furnace Value of Coke, I. Lowthian Bell, 39
- Blast Furnaces fed with New Coal, the Recovery of Tar and Ammonia from, Wm. Jones, 430
- Blindness, the Causes and the Prevention of, Dr. Ernst Fuchs, 623
- Blumentritt (Prof.), on the Negritos of the Philippines, 232
- Bochefontaine's Experiment on the Origin of Cholera, Trécul, 496
- Bohemia, Science in, 308
- Boiling Point Data, Melting and, T. Carnelley, 364
- Boisbaudran (M. Lecoq de) and W. Crookes, F.R.S., Radiant Matter Spectroscopy, 283
- Boissier (Edmond), Death and Obituary Notice of, 540
- Bokhara, Rev. Dr. Henry Lansdell on, 194
- Bolles (Arthur), Microtometist's Vade-Mecum, Dr. E. Klein, F.R.S., 147
- Bolton (H. C.), Catalogue of Scientific Periodicals, 426
- Bolton (Prof.), Sonorous Sand, 400
- Boltzmann's Theorem on the Kinetic Theory of Gases, 533
- Bombay, Meteorology of, 170
- Bombicci, Theoretical Views on the Detonation of Meteorites, 633
- Bompas (George), "Life of Frank Buckland," Rev. W. Tuckwell, 385
- Bonatelli (Signor), the Unthinkable, 120
- Bonney (Prof. T. G., F.R.S.), the Diorite of Little Knott, 189; on Bastite-Serpentine and Troktolite in Aberdeenshire, with a Note on the Rock of the Black Dog, 556; Preliminary Note on some Traverses of the Crystalline District of the Central Alps, 557
- Boosé (J. R.), Colonial Public Libraries, 183
- Boring, Deep, at Richmond, Surrey, Notes on, Prof. Judd, F.R.S., and C. Homersham, 310
- Borneo, British, Gold in, 161; Minerals of, 161
- Botany: and the Afghan Boundary Commission, 35; Staminy of Petals, 53; the Chair of Botany at Glasgow University, 61; a Course of Practical Instruction in Botany, F. O. Bower and Sydney H. Vines, 73; Bower and Vines's Work on Phanerogamae-Pteridophyta, 73; Antwerp International Botanical and Horticultural Congress, 182; Text-Book of General Botany, Dr. W. J. Behrens, 193; Dr. W. J. Behrens's Microscopical Investigation of Vegetable Substances, 193; Food-Plants used by the Katchin Tartars of Minusinsk, 208; a Specific Subject of Instruction in Public Elementary Schools, Vincent T. Murché, 222; Dr. Trimen's Catalogue of the Flowering Plants and Ferns of Ceylon, 354; International Botanical and Horticultural Congress, Antwerp, 1885, Prof. W. McNab, F.R.S., 416; Botany in South Australia, 462; on the Use of Graphic Representations of Life-Histories in the Teachings of Botany, Prof. Bower, 562; Botanical Gardens in Java, Dr. Sydney J. Hickson, 576; Botanical Exploration of the Chilean Andes, 601; Thomas Hick on the Caulotaxis of British Fumariaceae, 614; Botanical Exchange Club, 635
- Bothnia, Rapid Fall of Water in Gulf of, 515
- Bottomley (J. T.), Electric Resistance of Platinoid, 166; Cooling of Wires in Air and Vacuum, 536
- Bouquet (M.), Death of, 493
- Boulenger (Geo. Albert), Catalogue of Lizards in the British Museum, 49
- Boulger (G. S.), "Epping Forest," Edward North Buxton, 28
- Bower (F. O.), and Sydney H. Vines, "A Course of Practical Instruction in Botany," 73; on the Use of Graphic Representations of Life-Histories in the Teaching of Botany, 562
- Bowman (Dr. F. H.), "The Structure of the Wool Fibre in its Relation to the Use of Wool for Technical Purposes," 266
- Boyd (Thomas), Death of, 357
- Boys (C. V.), the Slide Rule, 627
- Bozward (J. L.), a White Swallow, 523
- Brachytarsus, Undescribed Species of, 6
- Brain, Evidence of Comparative Anatomy with Regard to Localisation of Function in the Cortex of the, Alex. Hill, 561
- Brain, Motor-Centres of the, and the Mechanism of the Will, Victor Horsley, 377
- Brain-Weight, Dr. P. Rey, 615
- Brain, Size of, in Extinct Animals, Prof. O. C. Marsh, 562
- Bramwell (Sir F.), the Training of the Civil Engineer, 11
- Braut (Lieut. L.), Death of, 426
- Brazil: Report on the Bituminous Deposits of the Camama Basin of Bahia, Cameron, 182; Geographical Society of Rio de Janeiro, 356; the Races of Brazil, 408
- "Breccia Gashes" near Sunderland, 559
- Breidden Hills, the Geology of the, W. W. Watts, 310
- Bremen Geographical Society, 233
- Brewer (Dr. T. M.), "Water-Birds of North America," 521
- Bridze, Forth, Benjamin Baker, 430
- Brieger (Prof.), on the Pitomaines, 239
- Briggs (Mary), a White Swallow, 500
- Bristol Naturalists' Society, 463
- Bristol, the Chair of Physics and Engineering at University College, 514
- BRITISH ASSOCIATION: Meeting at Aberdeen, 10, 437; Officers, &c., 10, 34, 61, 110, 298, 352, 400; Arrangements in Sec-



tion A, 181; General Arrangements, 437; Excursions, 437; Inaugural Address of the President, the Right Hon. Sir Lyon Playfair, K.C.B., M.P., F.R.S., 438; Notes for the Opening of a Discussion on Electrolysis, to be held in Section B, by Prof. Oliver Lodge, 451; General Proceedings, 466; *Conversations*, 466; Excursion to Balmoral, 467; Grants, 502; President for 1886, 502; Next Meeting to be at Birmingham, 503

*Reports of Committees.*—Report on the Proposed Publication of Daily Synoptic Charts of the Indian Ocean from 1861, 502; Second Report of the Committee on the Best Methods of Recording the Direct Intensity of Solar Radiation, 502; Third Report of the Committee for the Harmonic Analysis of Tidal Observations, 503; Second Report of the Committee appointed for Co-operating with Mr. E. J. Lowe in his project of establishing a Meteorological Observatory near Chepstow, 503; Report of the Committee for Promoting Tidal Observations in Canada, 503; Seventeenth Report of the Committee for Investigating the Rate of Increase of Underground Temperature downwards in various Localities of Dry Land and under Water, 503; Report of the Committee on the Fossil Plants of the Tertiary and Secondary Beds of the United Kingdom, 504; Report of the Committee for the Investigation of the Volcanic Phenomena of Vesuvius, 505; Report of the Committee for arranging for the Occupation of a Table at the Zoological Station at Naples, 506; Report of the Committee for Establishing Marine Biological Stations on the Coast of the United Kingdom, 506; Report of the Committee for Promoting the Survey of Palestine, 506; Report of the Committee on the Earthquake Phenomena of Japan, 526; Report of the Committee on Electrical Standards, 528; Report on Electrical Theories, Prof. J. J. Thomson, 528; Report on Standards of White Light, 529; Report of the Committee on Meteoric Dust, 529; Report of the Committee on Meteorological Observations on Ben Nevis, 529; Report of the Committee on Solution, 529; Report of the Committee on the Ultra-Violet Spark Spectra Emitted by Metallic Elements, 529; Third Report of the Committee on Chemical Nomenclature, 529; Report of the Committee on the Rate of Erosion of the Sea-Coasts of England and Wales, 530; Report of the Committee for Exploring Kilimanjaro and the adjoining Mountains of Equatorial Africa, 530; Report of the Committee on the North-Western Tribes of Canada, 531; Report on the Blackfoot Tribes, 531

*Section A (Mathematical and Physical Science).*—Opening Address by the President, Prof. G. Chrystal, M.A., F.R.S.E., 446; Prof. Crum Brown, on the Kinetic Theory of Gases, 533; Sir William Thomson, on Constant Gravitational Instruments, 535; Prof. Osborne Reynolds, on the Dilatancy of Media Composed of Rigid Particles in Contact, 535; Prof. Pirie, on Calculating the Surface-Tensions of Liquids by Means of Cylindrical Drops or Bubbles, 536; Prof. Pirie on the Surface-Tension of Water which contains a Gas Dissolved in it, 536; Lord Rayleigh, on the Thermodynamic Efficiency of Thermopiles, 536; J. Larmor, on Molecular Distances in Galvanic Polarisation, 536; J. T. Bottomley, on Cooling of Wires in Air and Vacuum, 536; Major A. W. Baird, on Levelling Operations of the Great Trigonometrical Survey of India, 536; Mr. A. Buchan, on the Rainfall of the British Islands, 536; W. H. Preece, on a Remarkable Occurrence during the Thunderstorm of August 6, 1885, 536; A. Buchan, on the Meteorology of Ben Nevis, 536; Dr. Courtney Fox, on the Sequence of Mean Temperature and Rainfall in the Climate of London, 536; W. H. Preece, on Domestic Electric Lighting, 537; Discussion on Standards of White Light, 537; A. Vernon Harcourt, on Photometry with the Pentane Standard, 537; Prof. W. M. Hicks, on the Constitution of the Luminiferous Ether on the Vortex Atom Theory, 537; J. Joly, on a Photometer made with Translucent Prisms, 537; R. T. Glazebrook, F.R.S., on a Point in the Theory of Double Refraction, 538; Prof. W. F. Barrett, on a New and Simple Form of Calorimeter, 538

*Section B (Chemical Science).*—Opening Address by the President, Prof. H. E. Armstrong, Ph.D., F.R.S., 449, 467; Prof. Ramsay, on the non-existence of Gaseous Nitrogen Trioxide, 538; Prof. Ramsay, on some Actions of a Grove's Gas Battery, 538; Sir H. E. Roscoe, F.R.S., on the Spontaneous

Polymerisation of Volatile Hydrocarbons at the Ordinary Atmospheric Temperatures, 538; J. T. Brierley, on New Vanadium Compounds, 538; T. Jamieson, on the Essential Food of Plants, 538; Prof. Odling, a Plea for the Empiric Naming of Organic Compounds, 538; Prof. T. Carnelley, on the Periodic Law, as illustrated by certain Physical Properties of Organic Compounds, 539; Prof. T. Carnelley, on the Cause of the Periodic Law, and the Nature of the Chemical Elements, 539; Dr. J. H. Gladstone, on the Value of the Refraction Goniometer in Chemical Work, 539; G. Gladstone, on the Refraction of Fluorine, 539; Prof. Gilbert, on the Conditions of the Development and of the Activity of Chlorophyll, 539; Prof. Pardie, on the Action of Sodium Alcoholates on Fumaric and Maleic Ethers, 539; on Sulphine Salts derived from Ethylene Sulphide, Dr. Orme Masson, 539; on an apparently New Hydrocarbon from Distilled Japanese Petroleum, by Dr. Divers and T. Nakamura, 539; the Composition of Water by Volume, Dr. A. Scott, 539; Prof. Dewar, on Solutions of Ozone and the Chemical Action of Liquid Oxygen, 540; F. Maxwell Lyte, on the Use of Sodium or other Soluble Aluminates for Softening and Purifying Hard and Impure Water, and Deodorising and Precipitating Sewage, Waste Water from Factories, &c., 540; J. Spiller, on Some New Crystallised Combinations of Copper, Zinc, and Iron Sulphates, 540; Prof. Clowes, on Barium Sulphate as a Cementing Material for Sandstone, 540

*Section C (Geology).*—Opening Address by the President, Prof. J. W. Judd, F.R.S., 453, 472; Hugh Miller, on some Results of a Detailed Survey of the Old Coast-Lines near Trondhjem, Norway, 555; Dr. J. C. Howden, on the Glacial Deposits of Montrose, 555; G. H. Kinahan, on Irish Metamorphic Rocks, 555; Prof. Frank Clowes, on Barium Sulphate as a Cementing Material in Sandstone, 555; W. Whitaker, on Deep Borings at Chatham: a Contribution to the Deep-seated Geology of the London Basin, 555; Sir Richard Owen, F.R.S., on American evidences of Eocene Mammals of the "Plastic Clay" Period, 556; Dr. Max Schuster, on some Results of the Crystallographic Study of Danburite, 556; Edward Hull, F.R.S., Notice of an Outline Geological Map of Lower Egypt, Arabia Petrea, and Palestine, 556; Dr. R. H. Traquair, F.R.S., a Preliminary Note on a New Fossil Reptile recently discovered at New Spynie, near Elgin, 556; Rev. E. Hill, on the Average Density of Meteorites compared with that of the Earth, 556; Prof. Edward Hull, F.R.S., on the Occurrence of Lower Old Red Conglomerate in the Promontory of the Fanad, North Donegal, 556; Prof. T. G. Bonney, F.R.S., on Bastite-Serpentine and Troktolite in Aberdeenshire, with a Note on the Rock of the Black Dog, 556; Lieut.-Col. Playfair, on the Re-discovery of Lost Numidian Marbles in Algeria and Tunis, 556; Prof. A. Renard, on some Rock-Specimens from the Islands of the Fernando Noronha Group, 556; Prof. T. G. Bonney, F.R.S., a Preliminary Note on some Traverses of the Crystalline District of the Central Alps, 557; Prof. H. Carvill Lewis, on the Direction of Glaciation as ascertained by the Form of the Striae, 557; B. N. Peach and J. Horne, on the Geology of Durness and Eriboll, with Special Reference to the Highland Controversy, 558; Chas. Lapworth, on the Highland Controversy in British Geology—its Causes, Course, and Consequences, 558; W. Ivison Macadam, on Certain Diatomaceous Deposits (Diatomite) from the Peat of Aberdeenshire, 559; Prof. G. A. Lebour, on some Recent Earthquakes on the Downham Coast, and their Probable Causes, 559; Prof. H. Carvill Lewis, on some Examples of Pressure-Fluxion in Pennsylvania, 559

*Section D (Biology).*—Opening Address by the President, Prof. W. C. McIntosh, LL.D., F.R.S., 476; Prof. Edward Hull, F.R.S., on the Cause of the Extreme Dissimilarity between the Faunas of the Red Sea and the Mediterranean notwithstanding their Recent Connection, 560; Prof. Struthers, on the Tay Whale (*Megaptera longimana*) and other Whales Recently Obtained in the District, 560; Prof. Turner, on Some Points in the Anatomy of Sowerby's Whale, 560; Prof. Struthers, on the Cervical Vertebrae of the Greenland Right Whale, 560; Prof. Struthers, on the Development of the Vertebrae of the Elephant, 560; Prof. Struthers, on the Development of the Foot of the Horse, 560; Prof. Cleland, on the Viscera of *Gymnotus electricus*,

- 561; Prof. Cleland, on the Spiracle of Fishes in its Relation to the Head, as Developed in the Higher Vertebrates, 561; D. J. Hamilton, Is the Commissural Theory of the Corpus Callosum Correct?, 561; Alex. Hill, on the Evidence of Comparative Anatomy with Regard to Localisation of Function in the Cortex of the Brain, 561; Prof. M'Kendrick, on the Action of Cold on Microphytes, 561; J. J. Coleman, on the Action of Ozonised Air upon Micro-Organisms and Albumen in Solution, 561; Prof. Bower, on the Use of Graphic Representations of Life-Histories in the Teaching of Botany, 562; Prof. J. Berry Haycraft, on a New Theory of the Sense of Taste, 562; Francis Day, on the Hybridisation of Salmonidae at Howietoun, 562; A. Hosie, on Chinese Insect White Wax, 562; Prof. O. C. Marsh, on the Size of the Brain in Extinct Animals, 562; D'Arcy W. Thompson, on the Systematic Position of the Chamaeleon and its Affinities with the Dinosauria, 562; Prof. Hull, on the Origin of the Fishes of the Sea of Galilee, 563; Prof. McIntosh, on the St. Andrews Marine Laboratory, 563; Dr. Oscar Loew, on a Chemical Difference between Living and Dead Protoplasm, 563; Sidney Martin, on the Digestion of Proteids in Plants, 563; Prof. L. Radlkofer, on the Application of the Anatomical Method to the Determination of the Materials of the Linnean and Old Herbaria, 563; M. Ward, Notes on Experiments as to the Formation of Starch in Plants under the Influence of the Electric Light, 563; Allen Harker, on the Coloration of the Anterior Segments of the Maldanidae, 564.
- Section E (Geography).*—Opening Address by the President, Gen. J. T. Walker, F.R.S., 481; Major F. Bailey, on the Indian Forest School, 564; A. Hosie, on Journeys in South-Western China, 564; Admiral Sir Erasmus Ommanney, F.R.S., Antarctic Discovery, 565; Cope Whitehouse, on Projected Restoration of the Reian Mæris, and the Province, Lake, and Canals ascribed to the Patriarch Joseph, 565; E. G. Ravenstein, on Batho-Hypsographical Maps, with Special Reference to a Combination of the Ordnance and Admiralty Surveys, 565; H. A. Webster, What has been done for the Geography of Scotland, and what remains to be done, 565; John Rae, F.R.S., a Word or Two on the Best and Safest Route by which to Attain a High Northern Latitude, 566.
- Section G (Mechanical Science).*—Opening Address by the President, B. Baker, M.Inst.C.E., 488.
- Section H (Anthropology).*—Opening Address by the President, Francis Galton, F.R.S., 507; Prof. W. Turner, on the Index of the Pelvic Brim as a Basis of Classification, 586; W. F. Stanley, on a Portable Scale of Proportions of the Human Body, 586; J. Theodore Bent, on Insular Greek Customs, 587; Gen. Pitt-Rivers, on the Preservation of Ancient Monuments, 587; Miss A. W. Buckland, on American Shell-Work and its Affinities, 587; E. F. im Thurn, on the Red Men about Koraima in British Guiana, 587; J. W. Crombie, on a Game with a History, 587; George Campbell, on the Rule of the Road from an Anthropological Point of View, 587; Jeanie M. Laing, on the Modes of Grinding and Drying Corn in Old Times, 587; A. J. Evans, on the Flint-Knappers' Art in Albania, 588; W. M. Flinders Petrie, on the Discovery of Naukratis, 588; Thomas Wilson, on a New Man of Mentone, 588; Dr. R. Munro, on the Archaeological Importance of Ancient British Lake Dwellings, and their Relation to Analogous Remains in Europe, 588; Prof. D. J. Cunningham, on Certain Points of Comparison between the Chimpanzee and Man, 588; Dr. J. G. Garson, on Abnormal and Arrested Development as an Induction of Evolutionary History, 589; Dr. Robert Laws, on the Manners and Customs of the Bantu Tribes of Lake Nyassa, 589; E. H. Man, on the Nicobar Islanders, 589.
- British Birds, History of, William Yarrell's, New Edition, 363  
 British Dairy Farming, James Long, Prof. John Wrightson, 571  
 British Islands, on the Rainfall of the, A. Buchan, 536  
 British Fumariaceae, the Caulotaxis of, Thomas Hick, 614  
 British Medical Association, 299  
 British Museum: Catalogue of Lizards in the, Geo. Albert Boulenger, 49; Catalogue of Fossil Mammalia in the, Part I, Richard Lydekker, 53; Part I, the Reviewer, 78; Mr. Allan Hume's Ornithological Collection (India) presented to the, 327; a Guide to the Universal Gallery of the (Natural History), L. Fletcher, 364  
 British New Guinea, "Torresia," a Proposed Name for, 357  
 "British Rainfall for 1884," G. J. Symons, 463  
 "Broca" Prize, the, 165  
 "Bronn's Classen und Ordnungen des Thierreichs," Prof. Butchli, Prof. E. Ray Lankester, 145  
 Brookville, Indiana, Natural History Society of, 208  
 Brown (Prof. Crum), the Kinetic Theory of Gases, 352, 533  
 Brown (E.), Wild Bees, 6  
 Brown-Sequard (Dr.), Anæsthesia unattended by Sleep, 144;  
 Biennial Prize of Paris Academy of Sciences awarded to, 208  
 Browning (Robert) as a Scientific Poet, Edward Berdoe, 36  
 Bruce (Eric S.), Application of Electric Lighting to Balloons, 278  
 Brunton (Dr. T. Lauder, F.R.S.), "Text-Book of Pharmacology, Therapeutics, and Materia Medica," Prof. Arthur Gamgee, F.R.S., 337  
 Brussels, Exhibition of Plans, &c., connected with Inland Navigation at, 35  
 Brussels Railway Congress, the, 401  
 Buchan (A.), on the Meteorology of Ben Nevis, 536; on the Rainfall of the British Islands, 536  
 Buchanan (J.), Thermo-Electric Position of Carbon, 263  
 Buchanan (J. Y.), Observations of the Temperature of the Sea and Air made during a Voyage from England to the River Plate in the s.s. *Leibnitz*, 126  
 Buckland (A. W.), on American Shell-Work and its Affinities, 587  
 Buckland (Frank), Life of, Geo. Bompas, Rev. W. Tuckwell, 385  
 Buckton (G. B., F.R.S.), Notes on the Action of the Wims-hurst Induction Machine, 51  
 Buildings, Earthquake, Prof. Wm. Muir, 245; D. A. Stevenson, 316  
 Bulletin de l'Académie Royale de Belgique, 68, 189, 358, 568  
 Bulletin of the Bussey Institution, Prof. John Wrightson, 195  
 Bulletin of the Philosophical Society of Washington, 358  
 Bulletin de la Société d'Anthropologie de Paris, 68, 165, 166, 615  
 Bulletin de la Société des Naturalistes de Moscou, 44  
 Buonfanti's (Marquis), Journey across Africa, 357; Death of, 376  
 Burbidge, on the Culture of Edelweiss in Great Britain, 208  
 Burder (Geo. F.), Red Rays after Sunset, 466  
 Bureau, Scientifique Central Néerlandais, 428  
 Bureaus, Scientific, of the U. S. Government, Co-ordination of the, 317  
 Burial-Grounds, Prehistoric, T. A. Archer, 548  
 Burmah, Italian Scientific Expedition to, 87  
 "Burnett Lectures, Second Course. On Light as a Means of Investigation," Prof. G. G. Stokes, F.R.S., Prof. P. G. Tait, 361  
 Busch (Prof.), Anomalies in Human Teeth, 71  
 Bussey Institution, Bulletin of the, Prof. John Wrightson, 195  
 Butleroff (Prof.), on the Phenomena of Isomerism, 87  
 Butschli's "Protozoa," Prof. E. Ray Lankester, F.R.S., 145  
 Buxton (Edward North), "Epping Forest," G. S. Boulger, 28
- Cables, Chain, and Chains, Thos. W. Traill, 572  
 Cæcilians, Development of the, 526  
 Caillaud (Romanet du), Life and Travels of Ordóñez de Cevallos, 88  
 Cailletet (M. L.), New Process of Liquefying Oxygen, 584  
 Calcutta, Earthquake in, 254, 279  
 California, Fourth Annual Report of the State Mineralogist of, H. G. Hanks, 100  
 Calladon (Prof.), a Remarkable Atmospheric Phenomenon in Switzerland, 426  
 Calorimeter, on a New and Simple Form of, Prof. W. F. Barrett, 538  
 Cambodians at Paris, Arrival for Study of Thirteen Young, 636  
 Cambrelent (M.), the Sand-hills of Gascony, 375  
 Cambridge Observatory, 253  
 Camelopardi, Double-Star 19 (Hav.), 183  
 Camerano (Lorenzo), Colours of Arctic and Alpine Animals, 77  
 Cameo (J. M.), Report on the Bituminous Deposits of the Camamu Basin of Bahia, 182  
 Campbell (George, M.P.), on the Rule of the Road, from an Anthropological Point of View, 587

- Canada: the Ancient Sacrificial Stone of North-Western Territory of, Jean L'Heureux, 46; Canadian Entomology, James Fletcher, 111; Mesozoic Floras of the Rocky Mountain Region of, Sir W. Dawson, F.R.S., 164; Geological and Natural History Survey of, Alfred R. C. Selwyn, F.R.S., 242; Catalogue of Canadian Plants, John Macoun, 242; Royal Society of Canada, 258; Flora of, Alfred W. Bennett, 294; the British Association Visit to, 438; Tidal Observations in, 503; North-Western Tribes of, 531
- Cape Town, Earthquake in, 110
- Capello (Capt.) and Commander Ivens, African Explorations of, 429
- Carbon Bisulphide in Prisms, on the Use of, Experiments by Dr. Henry Draper, 272
- Carbon, Combustion of, in Oxygen, H. B. Baker, 87
- Carbon Compound, Researches on the Relation between the Molecular Structure and Absorption Spectra of, by Prof. W. N. Hartley, F.R.S., 93
- Carbon, Thermo-Electric Position of, J. Buchanan, 263
- Carbonic Acid, the Absorption on Smooth Glass Surfaces of, Dr. Kayser, 72
- Carbonic Acid, Decomposition by Electric Spark of, H. B. Dixon and H. F. Lowe, 287
- Carcinoma in Lungs, Dr. Friedländer, 191
- Carey (Albert), Principles of Hygiene, 221
- Carles' Journeys in Corea, 403
- Carnelley (T.), Melting and Boiling-Point Data, 364
- Carniola, the Fossil Flora of, Baron von Ettingshausen, 311
- Caroline Islands, the, 464
- Carp, German, Importation into England of, 553
- Carp-Culture in China, Dr. Macgowan, 514
- Carpenter (Alfred), Flying-Fish, 147
- Carpenter (P. Herbert), an Encysting Myzostoma in Milford Haven, 391
- Carter (W. A.), Do Fish Sleep?, 580
- Cashmere, the Earthquake in, 110, 133, 161, 207, 254, 375
- Casman (M.), Death of, 376
- Cassell's "Encyclopaedic Dictionary," 355
- Catalogue of 1000 Southern Stars, 636
- Catfish, Acclimatisation of, 254, 375
- Caucasus, Earthquake in, 161
- Cell, Daniell, a Form of Standard, Dr. J. A. Fleming, 253
- Cells, Sulphur, Experiments with, Shelford Bidwell, 263
- Cemetery, Prehistoric, 518
- Cemetery of the Stone Age, Discovery of a, 401
- Centenarians: Entry of Prof. Chevreul on his Hundredth Year, 425
- Central Alps, Prof. T. G. Bonney, F.R.S., Preliminary Note on some Traverses of the Crystalline District of the Central Alps, 557
- Central Asia, Earthquakes in, 375
- Central Solar Eclipses in New Zealand, 86
- Centres, Motor, of the Brain and the Mechanism of the Will, Victor Horsley, 377
- Century of Science in Bengal, 638
- Cereals, Origin of the, 116; Growth of, 234
- Cerebotani (Dr. L.), a New Instrument for Distance-Measurement, 494
- Cerebral Lobes, on the Weight of the, Dr. Philippe Rey, 615
- Cerebrum, a Vasomotor Centre in the Cortex of, Dr. Raudnitz, 119
- Cirura vinula*, Larvæ of, Cyril B. Holman Hunt, 574
- Cervical Vertebrae of the Greenland Right Whale, Prof. Struthers, 560
- Cevallos (Ordoñez de), Life and Travels of, 88
- Ceylon, Dr. Trimen's Catalogue of the Flowering Plants and Ferns of, 354
- Chadwick (Herbert C.), "Foul Water," 245
- Chaffanjon's Mission on the Orinoco, 184
- Chain Cables and Chains, Thos. W. Trail, 572
- Challenger, Voyage of the, Reports on the Scientific Results of the, 203, 249
- Chamæleon, Systematic Position of the, and its Affinities with the Dinosauria, D'Arcy W. Thompson, 562
- Chambers (G. F.), Obituary Notice of the, Rev. T. W. Webb, 126
- Champs (Breton des), Death of, 513
- Charbon Fever, Inoculation against, A. Chauveau, 264
- Chareyre (J.), Cystoliths, 407
- Chatham, W. Whitaker on Deep Borings at, 555
- Chauveau (A.), Inoculation against Charbon Fever, 264
- Chemistry: A Treatise on Practical and Qualitative Chemistry, and Inorganic Analysis, Frank Clowes, 3; Original Researches in Chemistry and Mineralogy, J. Lawrence Smith, 3; Chemical Notes, 87; Chemical Reactions, Influence of Dilution and Excess on, Urech, 87; Chemical Society, 93, 143, 168; Organic Chemistry, Prof. Ira Remsen, M. M. Pattison Muir, 99; Contributions to the Chemistry of Chlorophyll, Edward Schunck, F.R.S., 117; Opening of Laboratory at Reading School, 328; Address at the British Association on, by Prof. H. E. Armstrong, Ph. D., F.R.S., 449, 467; Nucléine, Dr. Kossel, 520; Chemical Composition of American Grasses, Clifford Richardson, Prof. W. Frearm, 525; Prof. Ramsay, on the Non-Existence of Gaseous Nitrogen Trioxide, 538; Prof. Ramsay, on some Actions of a Grove's Gas Battery, 538; Sir H. E. Roscoe, on the Spontaneous Polymerisation of Volatile Hydrocarbons at the Ordinary Atmospheric Temperatures, 538; J. T. Brierley, on New Vanadium Compounds, 538; T. Jamieson, on the Essential Food of Plants, 538; Prof. Odling, a Plea for the Empiric Naming of Organic Compounds, 538; Prof. T. Carnelley, on the Periodic Law, as illustrated by certain Physical Properties of Organic Compounds, 539; Prof. T. Carnelley, on the Cause of the Periodic Law, and the Nature of the Chemical Elements, 539; Dr. J. H. Gladstone, on the Value of the Refraction Goniometer in Chemical Work, 539; G. Gladstone, on the Refraction of Fluorine, 539; Prof. Gilbert, on the Conditions of the Development and of the Activity of Chlorophyll, 539; Prof. Pardie, on the Action of Sodium Alcohols on Fumaric and Maleic Ethers, 539; on Sulphine Salts derived from Ethylene Sulphide, Dr. Orme Masson, 539; on an apparently New Hydrocarbon from Distilled Japanese Petroleum, by Dr. Divers and T. Nakamura, 539; the Composition of Water by Volume, Dr. A. Scott, 539; Prof. Dewar, on Solutions of Ozone and the Chemical Action of Liquid Oxygen, 540; F. Maxwell Lyte, on the Use of Sodium or other Soluble Aluminates for Softening and Purifying Hard and Impure Water, and Deodorising and Precipitating Sewage, Waste Water from Factories, &c., 540; J. Spiller, on Some New Crystallised Combinations of Copper, Zinc, and Iron Sulphates, 540; Prof. Clowes, on Barium Sulphate as a Cementing Material for Sandstone, 540; Chemical Nomenclature, 529; Cholesterin, Dr. Weyl, 544
- Chesapeake Zoological Laboratory, the, 400
- Chevreul (M. E.), Celebration of the Hundredth Birthday of, 278, 425, 462
- Childhood, the Three First Years of, Bernard Perez, W. Odell, 412
- Chili, the Reported Discovery of a Glacier in, 184
- Chilian Andes, Botanical Exploration of the, 601
- Chimpanzee: Prof. D. J. Cunningham on Certain Points of Comparison between the Chimpanzee and Man, 588
- China: Chinese Insect Wax, R. McLachlan, F.R.S., 6; A. Hosie, 562; School Books in Chinese, 35; Earthquakes in China, 37, 231; Meteorology of the China Seas, 84; the Jesuit Meteorological Establishments near Shanghai, 579; Potanin's Last Voyage to, 135; Chinese Translation of Gray's Anatomy and Holder's Osteology, Dr. Dudgeon's, 514; Carp-Culture in China, Dr. Macgowan, 514; the Red River Route to, 554; Journeys in South-Western China, by A. Hosie, 564
- Chittagong Hill Tribes, Dr. Emil Riebeck, 169; Zoology of, Dr. Riebeck's—the Gayal and Gaur, W. T. Blanford, F.R.S., 243
- Chlorate of Potash, Iridescent Crystals of, Prof. G. G. Stokes, 224
- Chlorophyll, Contributions to the Chemistry of, Edward Schunck, F.R.S., 17
- Chlorophyll, Colourless, C. Timiniazefi, 342
- Cholera: Inoculation for, Dr. Ferran's Experiments, 62, 85, 159, 288; the Nature of Cholera, Dr. Cornish, 160; the Report on the Germ Theory of Cholera, 353; Jackdaws and the Cholera, 400; on an Alkaloid Extracted from Liquid used in Cultivation of Koch's Cholera Microbe, A. G. Poachet, 432; Case of Asiatic Cholera at Cardiff, 460; Bochefontaine's Experiment on the Origin of Cholera, Trécul, 496; on the Development of Cholera in India, Gustave Le Bon, 543; Conclusions of the Commission on, 608

- Cholesterin, Dr. Weyl, 544  
 Christiania, Popular Education in Astronomy at, 133; Society of Science, 120, 216; Zoological Garden for, 553  
 Christy (Thos.), New Commercial Plants and Drugs, 125  
 Chronometer Observatories of Kiel and Hamburg, 230  
 Chronometry: Prof. Zinger on the Determination of Time, by Corresponding Heights of Different Stars, 63; the Proposed Change of Time for beginning the Astronomical Day, 132  
 Chrystal (Prof. G.), Opening Address in Section A (Mathematics and Physical Science) at the British Association, 446  
 Chang K'ang, Eclipse of, 276  
*Cicada septendecim*, Prof. Riley, 253  
 Cincinnati Observatory, 356  
 Circles, Hut, Worthington G. Smith, 29  
 Cirrus Clouds, the Mean Direction over Europe of, Dr. Hildebrandson, 190  
 City and Guilds of London Institute, 328; Studentships at, 354  
 Civil and Astronomical Time, the Question of, 245  
 Clark (J. Edmund), New Star in Andromeda, 499; Prof. Kiessling's Investigations of the late Sunset Glows, 637  
 Clark (J. W.), on Certain Cases of Electrolytic Decomposition, 167; Radiant Energy Recorder, 343  
 Clarke (Dr. Hyde), Pre-Existence and Post-Existence of Thought, 102; Possible Windfall for Science, 342  
 Claus (Dr. C.), "Elementary Text-Book of Zoology," 122  
 Clayton (J.), Evolution of Vegetation, 223  
 Cleland (John), Composite Portraits, 197  
 Cleland (Prof.), Viscera of *Gymnotus electricus*, 561; on the Spiracle of Fishes in its Relation to the Head as developed in the Higher Vertebrates, 561  
 Clifford (Prof. W. K.), His Papers and MSS., R. Tucker, 4; "The Common Sense of the Exact Sciences," Prof. P. G. Tait, 124, 196  
 Clifford's Kinetic, R. Tucker, 147  
 Clifford (Prof.) and Prof. Tait, 173  
 Clifton Hall Colliery Explosion, the, 181  
 Climate, Influence of Forests on, 115  
 Climatology, Woeikof's "Climates of the Globe," 11  
 Cloud-Measurement by Theodolites, 400  
 Clouds, Heights of, 630  
 Clowes (Prof. Frank), "A Treatise on Practical Chemistry and Qualitative Inorganic Analysis," 3; on Barium Sulphate as a Cementing Material in Sandstone, 555  
 Coal, the Coking of, 39  
 Coal, Petroleum Gas used for Manufacturing Purposes instead of, 463  
 Coal-Dust, Experiments with, at Neunkirchen, in Germany, W. Galloway, 55  
 Coal-Dust Theory of Colliery Explosions, 61  
 Coal-Fields, the North Wales and Shrewsbury, D. C. Davies, 118  
 Coal-Fields in Africa, Discovery by Major Serpa Pinto of, 164  
 Coal Tar Colours, Dr. Perkin on the, 303, 330  
 Cobbold (Paul A.), Remarkable Sunset, 626  
 Cobra di Capello, on the Poison of the, Herr Gnezda, 71  
 Coke, the Blast-Furnace Value of, I. Lowthian Bell on, 39; the Coking of Coal, 39  
 Coleman (J. J.), Action of Ozonized Air upon Micro-Organisms and Albumen in Solution, 561  
 Collet (Lieut.), Practical Guide for Compensation of Compasses without Bearings, 386  
 Collett (Dr. R.), Observations on Rudolphi's Whale, 374  
 Colliery Explosion, the Clifton Hall, 181  
 Colliery Explosions, the Coal-Dust Theory of, 61  
 Collisions, Preventing, with Icebergs in a Fog, Prof. Alex. Graham Bell, 273; J. Joly, 367  
 Cologne, Opening of Direct Steam Traffic between the Open Sea and, 164  
 Colonial Exhibition, Fish in the, 515  
 Colonial Public Libraries, J. R. Boosé, 183  
 Colorado, Science in, 330  
 Coloration of the Anterior Segments of the Maldanidae, Allen Harker, 564  
 Colour Mixtures, Lecture Experiments on, Capt. Abney, F. R. S., 263  
 Colour-Sense, on the, Major Allan Cunningham, 604  
 Colour, Sense of, Margaret Heaton, 626  
 Colourless Chlorophyll, C. Timiriazeff, 342  
 Colours of Arctic and Alpine Animals, Lorenzo Camerano, 77; Prof. R. Meldola, 172  
 Colours, Coal Tar, Dr. Perkin on the, 303, 330  
 Comberbatch (Vice-Consul), Report on the Dobrudja, 64  
 Combustion of Phosphorus and Carbon in Oxygen, H. B. Baker, 87  
 Comets: Tuttle's, 13, 301, 402; Tempel's, 1867 II., 37, 356; Tempel-Swift Comet (1869-80), 112; Periodical Comets of De Vico and Barnard, 183; Periodical Comets in 1886, 636; Comet of 1472, 231; the New Comet, 280, 464; Barnard, July 7, 301, 359; Comet of 1652, 402; on the Present State of Computations of Orbits of Comets, Prof. Weiss, 516; Elements of Brook's Comet, R. Radau, 543; the Comet of 1866, and the Meteors of November 14, 610; Cometary Orbits, 162  
 "Commercial Organic Analysis," Alfred H. Allen, 410  
 Commercial Plants and Drugs, New, Thos. Christy, 125  
 Commissural Theory of the Corpus Callosum, Is it Correct?, D. J. Hamilton, 561  
 Commodore Islands, the Resources of the, Dr. Dybovsky, 113  
 Common (A. Ainslie, F.R.S.), New Star in Andromeda, 522  
 Common Sense of the Exact Sciences, Prof. W. K. Clifford's, Prof. P. G. Tait, 124, 196  
 "Comparative Anatomy and Physiology," F. Jeffrey Bell, 569  
 Compensation of Compasses without Bearings, Practical Guide for, Lieut. Collet, 386  
 Complexion, Proportion of German, &c., School Children with Dark and Fair, 85  
 Composite Portraits of Members of the National Academy of Sciences, U.S.A., Raphael Pumpelly, 176  
 Composite Portraits, John Cleland, 197; Dr. C. M. Ingleby, 224  
 Compound Locomotive, 197  
 Condreau's (H.) Journeys in Guiana, 164  
 Congo, the, Henry M. Stanley, 154; Grenfell's Explorations in the Congo Basin, 302; Lieut. Wissmann's Congo Explorations, 554  
 Congress, National Sanitary, 50  
 Connor (Rochfort), Microscopic Drawings, 633  
 Constant Gravitational Instruments, Sir William Thomson, F.R.S., 535  
 Cooke (Dr. J. P.), "Scientific Culture," 426  
 Co-ordination of the Scientific Bureaus of the U.S. Government, 317  
 Copenhagen, University of, Lady Students at, 355  
 Coral Reefs and Islands, the Origin of, Jas. D. Dana, 554  
 Coral Trade, the Mediterranean, 36  
 Corea, Carles' Journeys in, 403; Discovery of Gold in, 403; Proposed Telegraph Lines in, 427  
 Corn: Jeanie M. Laing on the Modes of Grinding and Drying Corn in Old Times, 587  
 Cornish (Dr.), the Nature of Cholera, 160  
 Cornwall, Occurrence of *Torpelo marmorata* off the Coast of, Francis Day, 197  
 Corpus Callosum, Is the Commissural Theory of the, Correct?, D. J. Hamilton, 561  
 Cortex Cerebri on the Temperature of Human Body, on the Influence of, Prof. Eulenburg, 496  
 Corvo (L. de A.), Tuberculosis in the Vine, 496  
*Corvus japonensis*, H. Pryer, 110  
 Cosmogony, the Relations between Geological Epochs and the Stages of the Terrestrial, M. Faye, 132  
 Costa Rica, Dr. Polakowsky's Explorations in, 184  
 Costerus (J. C.), Staminy of Petals, 53  
 Cotopaxi, Eruption of, 375, 428  
 Crane, Message from General Gordon borne to Sweden by a, 208  
 Crannogs of Scotland and Ireland, Dr. R. Munro on, 588  
 Cremation of a Body in a Common Stove, Experiment on, 161  
 Cremation, Refusal of Austrian Government to authorise Private Societies for, 161  
 Cremona's (Prof.) "Projective Geometry," 62  
 Crepuscular Light, 239; the Cosmic Origin of, 359; Hirn on, Faye, 432  
 Crévaux Expedition, Thouar's Journey in Search of, 14  
 Croall (Alexander), Death of, 111  
 Croft (Chas.), Rainbow Phenomenon, 30  
 Crombie (J. W.), on a Game with a History, 587



- Crookes (W., F.R.S.) and M. Lecoq de Boisbaudran, Radiant Matter Spectroscopy, 283  
 Cross-Fell, the Helm-Wind of, 23  
 Crystallography: Dr. Max Schuster on some Results of the Crystallographic Study of Danburite, 556  
 Crystals, Iridescent, of Potassium Chlorate, H. G. Madan, 102;  
 Prof. G. G. Stokes, 224  
 Cunningham (Prof. D. J.), "on Certain Points of Comparison between the Chimpanzee and Man, 588  
 Cunningham (Major Allen), on the Colour-Sense, 604  
 Cunningham (J. T.), Reports of the United States Commission of Fish and Fisheries for 1881-1882, 79; Scottish Marine Station, 176; Resting Position of Oysters, 597  
 Curator, a Lady, E. L. Layard, 30  
 "Curiosity-shop" Beds of New Zealand, Correlations of, Capt. Hutton, 311  
 Curtis (J. S.), Silver-Lead Deposits of Eureka Nevada, 50  
 Cycle, Meteoric, and Stonehenge, R. Edmonds, 436  
 Cyclones: in United States, 328; in Sweden, 355; on a Supposed Periodicity of Cyclones of the Indian Ocean South of the Equator, Chas. Meldrum, F.R.S., 613; on the Cyclonic Character of the Solar Spots, Faye, 495  
 Cystoliths, J. Chareyre, 407
- Dagincourt (Dr.), "Annuaire Géologique Universel et Guide du Géologie autour de la Terre," 436  
 Dairy Farming, British, James Long, Prof. John Wrightson, 571  
 Dana (Jas. D.), the Origin of Coral Reefs and Islands, 554  
 Danburite, Dr. Max Schuster on some Results of the Crystallographic Study of, 556  
 Danish Expedition to Greenland, 164, 256; Return of the, 554  
 Darwin Medal, Award of, 230  
 Darwin Memorial, 61, 84, 121  
 Davidson (Dr., F.R.S.), Death of, 607  
 Davies (D. C.), the North Wales and Shrewsbury Coal Fields, 118  
 Davis (A. S.), Ocular After-Images and Lightning, 126  
 Davis Lectures on Zoological Subjects, the, 132  
 Dawkins (Prof. W. Boyd, F.R.S.), Contributions to the History of the Pliocene and Pleistocene Deer, 118; the Antiquities of the Isle of Man, 579  
 Dawson (Sir William, F.R.S.), on the Mesozoic Floras of the Rocky Mountain Region of Canada, 164; President of the British Association for 1886, 502  
 Day (Francis), the Male Sole is not Unknown, 78; Occurrence of *Torpelo marmorata* off the Coast of Cornwall, 197; on the Occurrence of *Lumpenus lumpetiformis* and *Gadulus argenteus* off Aberdeen, 223; Hybridisation of Salmonidae at Howietoun, 562  
 Day, Proposed Change in Time for beginning the Astronomical, 132  
 Daylight-Occultation of Aldebaran on May 22, 1868, 86, 183  
 "Decomposition" of Didymium, the, Dr. C. A. von Welsbach, 435  
 Deep Borings: W. Whitaker on Deep Borings at Chatham, 555  
 Deer, Contributions to the History of the Pliocene and Pleistocene, W. B. Dawkins, F.R.S., 118  
 Deering (W. H.), Plutarch on Petroleum, 29  
 Definitions, Electrical, Nomenclature and Notations, Prof. Andrew Jamieson, 184  
 Degrees in Europe, Publication of the Norwegian Commission of the Measurement of (Geodesy), 547  
 Dehérain (P. P.), Experiments to ascertain most Productive Kind of Wheat, 496  
 "Deinocerata, a Monograph of an Extinct Order of Gigantic Mammals," Prof. O. C. Marsh, Dr. Arch. Geikie, F.R.S., 97  
 Delimitation Commission, Afghan, Dr. J. E. T. Aitchison, F.R.S., 226  
 Demyen and Marey, the Mechanism of the Pump, 432  
 Denning (W. F.), Meteors, 597; April Meteors, 5; July Meteors, 342; August Meteors, 415; Jupiter, 31; Recurrence of Markings on Jupiter, 196; Red Spot on Jupiter, 626; Mars, Jupiter, and Saturn, 548; the New Star in Andromeda, 465; Fireball, 466
- Density of Gases and Air, Dr. Agamemnone's Experiments on, 48  
 Density, Mean, of a Body combining all Known Elements in a Solid State, Bartoli, 635  
 Determinants, Text-Books of, "Icciones de Coordinatoria con las Determinantes y sus principales aplicaciones," D. Antonio Suarez y D. Luis G. Gasco, 411  
 Determinants, Traité Élémentaire des, L. Lehoulloux, 411  
 Determinanten, für den ersten Unterricht in der Algebra bearbeitet, die, Dr. H. Kaiser, 411  
 Development of the Cæcilians, 526  
 De Vico and Barnard, Periodical Comets of, 183  
 Devonian Insects of New Brunswick, 53  
 Devonian System of Russia, 307  
 Diatomite, W. Ivison Macadam on Certain Diatomaceous Deposits (Diatomite) from the Peat of Aberdeenshire, 559  
 Dictionary, English, Philological Society's, 159  
 Dicyonodon in the Triassic Sandstone of Elgin, Presence of the Remains of, Prof. J. W. Judd, F.R.S., 572  
 Dicynodontia, New Fossil Species of, 556  
 Didymium, the "Decomposition" of, Dr. C. A. von Welsbach, 435  
 Dieulaufait, Application of Thermo-Chemistry to Explanation of Geological Phenomena, 592  
 Dilatation of Liquids, on Formulæ of, Prof. Mendeléeff, 87  
 Dinosauria, Systematic Position of the Chamaeleon, and its Affinities with the, D'Arcy W. Thompson, 562  
 Diorite of Little Knott, the, Prof. T. G. Bonney, F.R.S., 189  
 Disinfection of Sewers, Dr. Italo Giglioli, 415  
 Distance-Measurement, New Instrument for, Dr. L. Cerebotani, 494  
 Dixon (H. B.), Decomposition of Carbonic Acid by Electric Spark, 287  
 Dobrudja, Report on the, Vice-Consul Comberbatch, 64  
 Docks, Harbours and, L. F. Vernon-Harcourt, 291  
 Dogfish at Inventions Exhibition, Breeding of, 254; at Royal Aquarium, Ova of, 515  
 Doornies, Earthquake at, 207  
 Dohrn (Dr. A.), on Zoological Research, 43  
 Donaldson's Observations on Temperature-Sense, 111  
 Doolittle (Prof.), "Practical Astronomy," 462  
 Dorsetshire, Mirage in, Rev. M. F. Billington, 552  
 Douai, Earthquake at, 207  
 Double-Stars, 610; 19 (Hev.) Camelopardi, 183; Double-Star Measures, 86  
 Downing (A. M. D.), Proposed Change in the Astronomical Day, 523  
 Drainage, Banner System of, Banner Brothers and Co., 272  
 Draper (Dr. Henry), Experiments made by, on the Use of Carbon Bisulphide in Prisms, 272  
 Drawing of a Mammoth, an Old, Baron A. E. Nordenskjöld, 228  
 Drugs, Plants and New Commercial, Thos. Christy, 125  
 Dudgeon's (Dr.), Chinese Translations of Gray's Anatomy and Holden's Osteology, 514  
 Duncan (Prof. O. M., F.R.S.), on the Ambulacra of Fossil Echinoidea, 69  
 Dundee, Proposed School of Medicine in, 254  
 Dunes of Gascony, the, Cambrelent, 375  
 Durness: B. N. Peach and J. Horne, on the Geology of Durness and Eriboll, with Special Reference to the Highland Controversy, 558  
 Dutch African Expedition, the, 403  
 Dutch Expedition to New Guinea, Proposed, 87  
 Dutch Geographical Society, 16  
 Dutch West Indian Expedition, Departure of, 16  
 Dybowski (Dr.), the Resources of the Commodore Islands, 113  
 Dyer (W. Thielton, F.R.S.), the Square Bamboo, 391  
 Dynamical Theory of Gases, 352  
 Dynamics, a Self-Recording Stress and Strain Indicator, Prof. H. S. H. Shaw, 70  
 Dynamite, the Blowing up of Hell Gate with, 552  
 Dynamo, on the Self-Regulation of the Compound, Prof. A. W. Rücker, 22
- Earth's Atmosphere, Sunlight and the, S. P. Langley, 17, 40  
 Earth, Vegetation of the, A. Grisebach, W. Botting Hemsley, 315; Dr. W. Engelmann, 366

- Earthquakes, 574; in Austria, 11, 460; in Austria and Smyrna, 85; of November 14, 1884, at Pu-erh, in China, the, 37; at Cape Town, 110; on the Causes of the Andalusian, A. Rzehak, 133; in Caucasus, 161; Recent Earthquakes, William Scarnell Lean, 175; J. Lovell, 175; at Douai, 207; at Dognies, 207; at Flers-en-Escrebieux, 207; at Cashmere, May 13, 110, 133, 161, 207, 375; in Cashmere and Calcutta, 254; at Kopreinitz, in Styria, 231; Chinese Theory of the Origin of, 231; in Bengal, 279, 300; at Velez-Malaga, 279; Teneriffe, 300; Recent, in Switzerland, F. A. Forel, 295; American, C. G. Rookwood, 300; at Pishpek, 329; in Spain, 329; in Central Asia, 375; in Styria, 427; in Indian Archipelago, 427; at Benevento, 515; in Ferghana, 515; in Japan, 526; at Granada and Palermo, 609; Submarine, at New York, 495; Prof. G. A. Lebour on some Recent Earthquakes on the Downham Coast and their Probable Causes, 559; Artificial, 114; T. C. Lewis, 295; an Earthquake Invention, 222; Prof. C. Piazzi Smyth, 213, 625; D. A. Stevenson, 213; Prof. John Milne, 573; Fouque's Electrical Apparatus for registering Propagation of, 254; Frequencies, Dr. Knott, 299; Earthquake-Proof Buildings, Wm. Muir, 245; D. A. Stevenson, 316
- Earth-Tips and Earth-Tremors, on the Observation of, Prof. John Milne, 259
- Eastern Archipelago, Naturalist's Wanderings in the, Alfred R. Wallace, 218
- Ebonite, Photographic Action on, Edward E. Robinson, 626
- Echinoidea, on the Ambulacra of Fossil, Prof. P. Martin Duncan, F.R.S., 69
- Eclipses: Central Solar, in New Zealand, 86; of Chung K'ang, 276; of August, 1886, 296; of the Sun, Recent Total, 631
- Edelweiss in Austria, Agitation for Protection of the, 134; its Culture in England, 208
- Edinburgh: Royal Society, 10, 70, 94, 190, 311, 384; Royal Physical Society, 119; Mathematical Society, 168, 263; Chair of Comparative Embryology at, 327; Honorary Degrees Conferred by the University of, 353; G. F. Armstrong appointed Professor of Engineering at, 426; Edinburgh International Industrial Exhibition, 541
- Edmonds (R.), Meteoric Cycle and Stonehenge, 436
- Education: School-Books in Chinese, 35; Higher Education for Adults, 36; Industrial, in Austria and Russia, 63; Education in Tunis, 134; Female Education in Russia, 162; Education in the United States, 518; the Neglect of Science in Public Schools, 552
- Edwards (Henry Milne-), Obituary Notice of, 321
- Eels at Vincennes, Emigration of, 111
- Egypt, Prehistoric Stone Implements of Eastern, Dr. Schweinfurth, 161; W. M. Flinders Petrie's Collection of Egyptian Antiquities, 353
- Eklund (Prof. A. W.), Death of, 207
- Elasticity, Terminology of the Mathematical Theory of, W. J. Ibbetson, 76; Nomenclature in, Prof. Alex. B. W. Kennedy, 269; Robert E. Baynes, 316; Measurement of the "Modulus" of, Dr. König, 360
- Electricity: at the Inventions Exhibition, 106; "Secondary Generators" of Messrs. Gaulard and Gibbs at the Inventions Exhibition, 225; "On Charging Secondary Batteries," W. H. Preece, F.R.S., 142; Experiments with Sulphur Cells, Shelford Bidwell, 263; a Form of Standard Daniell Cell, Dr. J. A. Fleming, 263; Molecular Radiation in Incandescent Lamps, Dr. J. A. Fleming, 263; Decomposition of Carbonic Acid by, H. B. Dixon and H. F. Lowe, 287; Terminology of the Mathematical Theory of, William Sutherland, 391; Henry Muirhead, 437; on the Origin of Thunderstorm, Prof. L. Sohncke, 406; Magnetism and Electricity, W. G. Baker, 340; Electric Resistance of Platinoid, J. T. Bottomley, 166; Electrical Resistance of Selenium, the Action of Light in Diminishing, Shelford Bidwell, 167; Nomenclature and Notation of Electrical Definitions, Prof. Andrew Jamieson, 184; Electrical Engineering at University College, Professorship of, 253; Electrical Phenomenon, J. B. A. Watt, 316; in Mid-Lothian, Dr. Robert Lucas, 343; Electrical Apparatus, 401; Electrical Standards, B.A. Report on, 528; Electrical Theories, Prof. J. J. Thomson, 528; Electro-Magnetic Theory of Light, Sir William Thomson and Maxwell's, Prof. George Francis Fitzgerald, 4; Electro-Magnetic Wave, on a Model illustrating the Propagation of the, Prof. S. P. Thompson, 70
- Electric Lighting, 608; in Afghanistan, 134; Proposed Use for Night Harvest Work in Algiers, 162; in Paris, 514; on Domestic Electric Lighting, W. H. Preece, F.R.S., 536; Electric Lighting of Fishing Boats, 553; Notes on Experiments as to the Formation of Starch in Plants under the Influence of the Electric Light, M. Ward, 563
- Electrolysis, Notes for the Opening of a Discussion on, to be held in Section B, at the British Association in Aberdeen, September, 1885, by Prof. Oliver Lodge, 458
- Electrolyte, Voltaic Cell with a Solid, Shelford Bidwell, 345, 391; Prof. Silvanus P. Thompson, 366
- Electrolytic Decomposition, on Certain Cases of, J. W. Clark, 167
- Elephant, on the Development of the Vertebrae of the, Prof. Struthers, 560
- Eleven-Year Meridional Oscillation of the Auroral Zone, E. Douglas Archibald, 414
- Elgin, Presence of the Remains of Dicynodon in the Triassic Sandstone of, Prof. J. W. Judd, F.R.S., 572
- Elkin (Dr.), Investigations with the Heliumeter, 329
- Ellis (A. J., F.R.S.), Aboriginal Inhabitants of the Andaman Islands, 409
- Ellis (Herbert), Are there Rabbits in the Western Islands? 575
- Embryo, Physiology of the, W. Preyer, F. J. Allen, 267
- Embryology, Chair of Comparative, at Edinburgh University, 327; Dr. J. G. Garson on Abnormal and Arrested Development as an Induction of Evolutionary History, 589
- "Encyclopaedic Dictionary," Cassell's, 355
- Encysting Myxostoma in Milford Haven, P. Herbert Carpenter, 391
- Endowment for Research, the New, Chas. Sedgwick Minot, 297
- Endowment of Research in Norway, 207
- Energy Recorder, Radiant, Prof. J. W. Clark, 233, 343
- Engelmann (Dr. W.), Grisebach's "Vegetation of the Earth," 366
- Engineer, the Training of the Civil, Sir F. Bramwell, 11
- Engineering (Electrical) at University College, Professorship of, 253
- Engineering at Edinburgh, G. F. Armstrong appointed Professor of, 426
- England, Rainfall of N.W., Alf. O. Walker, 271
- English Lake District, Flora of the, J. G. Baker, F.R.S., 75
- Ensilage, 605
- Enteroclorophyll, Dr. McMunn, 69
- Entomology, 253; "The Earliest Winged Insects of America," 53; Canadian Entomology, James Fleteher, 111; Fossil Entomology, Herbert Goss, 190; Entomological Society, 216; Charter granted to, 353; Lepidoptera of Great Britain and Japan compared, 427
- Eocene Mammals, Sir Richard Owen, F.R.S., on American Evidences of, 556
- Epidermis and Cutis, Absence of Cementing Substance between, Dr. Blaschko, 544
- "Epping Forest," Edward North Buxton, 28; G. S. Boulger, 28
- Equator, Upper Wind Currents over the, Hon. Ralph Abercromby, 624
- Eriboll: B. N. Peach and J. Horne on the Geology of Durness and Eriboll, with special reference to the Highland Controversy, 558
- Erosion of Sea-Coasts, 530
- Errera (Léo), the Value of Indian Ink in Microscopy, 37
- Esparto Grass in Australia, Cultivation of, 462
- Essex Field Club, 34, 299, 330, 513
- Ethnology: Government Inquiry into Castes and Occupations of the Bengalese, 36; Formosan Ethnology, 346
- Ettingshausen (Baron von), the Fossil Flora of Carniola, 311
- "Euclid and his Modern Rivals," 171
- Euclid, Book I., Braithwaite Arnett, 221; Key to the Elements of, J. S. Mackay, 388
- Eulenburg (Prof.), on the Influence of Cortex Cerebri on Temperature of Human Body, 496
- Eureka, Nevada, Silver-Lead Deposits of, J. S. Curtis, 50
- Evans (A. J., F.S.A.), on the Flint-Knappers' Art in Albania, 588
- Evans (C.), Red Hail, 54
- Evaporation, Measurement of, Geo. Haslam, 357

- Evolution of the Phanerogams, MM. Marion and Saporta, J. Starkie Gardner, 289; Prof. W. C. Williamson, F.R.S., 364
- Evolution of Vegetation, J. Clayton, 223
- Ewald (Prof.), Lactic Acid in the Gastric Juice, 24
- Exact Sciences, Clifford's Common Sense of the, Prof. P. G. Tait, 124, 196
- Excursions et Reconnaissances de Saigon, 88
- Exhibition of Labour at Paris, 401
- Experimental Farming, 224; on a Field at Rothamsted, Prof. J. Wrightson, 58
- Explorations, Recent, of the Pamir, 59
- Explosion, the Hell-Gate, 575; and Rackarock, Dr. H. Sprengel, F.R.S., 625
- Eyes, Insects', Mr. Lowne on the Morphology of, Dr. E. A. Schäfer, F.R.S., 3
- Fairlie (Robert F.), Death of, 328
- Farming, British Dairy, James Long, Prof. John Wrightson, 571
- Farming, Experimental, 224
- Faroe Islands; Disappearance of a well-known Landmark, "The Monk," 404
- Fascine Dwellings in Europe, 588
- Fat, Formation in the Animal Body, Dr. J. Munk, 335
- Fauna, Freshwater, Silesian, Dr. P. Zacharias, 160
- Fauna of Russian Central Asia, Rev. Dr. Henry Lansdell, 56
- Fauna of the Seashore, Prof. H. N. Moseley, F.R.S., 212, 417; Arthur R. Hunt, 243, 390; W. R. Hughes, 294
- Fauna of Shallow Seas, Influence of Wave-Currents on the, Arthur R. Hunt, 547
- Fauna of Trans-Alay, 335
- Faye (M.), 61; the Stadia of the Earth's History, 132; "Sur l'Origine du Monde," 132; Typhoons, 408; Hirm on Crepuscular Lights, 432; on the Cyclonic Character of the Solar Spots, 495
- Féa (M. Leonardo), Expedition to Burmah, 87
- Feilberg's (Col.), Exploration of Pilcomayo River, 64
- Ferghana, Earthquakes in, 515
- Fernando Noronha (Islands), Prof. A. Renard, on some Rock Specimens from the, 556
- Ferran's (Dr.), Experiments on Inoculation for Cholera, 62; Conclusions of the Commission on, 608; Dr. E. Klein, F.R.S., on, 617
- Fertilisation, the Rôle of Wind in, M. Alluard, 134
- Fibre, Structure of the Wool, in its Relation to the Use of Wool for Technical Purposes, Dr. F. H. Bowman, 265
- Fidget, the Measure of, 174
- Field Club, Bath Natural History and Antiquarian, 12
- Field Club, the Essex, 34
- Field Experiments at Rothamsted, Prof. J. Wrightson, 58
- Fifeshire, Discovery of a Cemetery of the Stone Age in, 401
- Films, Liquid, Prof. A. W. Rücker, F.R.S., 210
- Filter Paper, Spreading of Various Saline Solutions on, J. U. Lloyd, 87
- Finite and Real, a New Example of the Use of the Infinite and Imaginary in the Service of the, Prof. J. J. Sylvester, F.R.S., 103
- Finmarken, Norwegian Expedition to, 114
- Finsbury Technical College, *Conversazione* at, 278; Student-ships at, 354
- Fiasch (Dr.), Return of, 252
- Fireball, W. F. Denning, 466
- Firth of Forth, Temperature of Water in, H. R. Mill, 70; Monograph of the Algae of the, George William Traill, 101
- Fischer (Dr.), Morphology of the Mediterranean Coasts, 163
- Fish, Flying, Alfred Carpenter, 147; in United States, Acclimatisation of Flat Fish, 514; Fish in the Colonial Exhibition, 515; Do Fish Sleep?, W. A. Carter, 580; Value of a Marine Laboratory to the Development and Regulation of Sea Fisheries, Prof. E. Ray Lankester, F.R.S., 65; Reports of the United States Commission of Fish and Fisheries for 1881-1882, J. T. Cunningham, 79; Norwegian Fisheries, 114; Annual Report of the Fishery Board for Scotland for 1884, 281; Foreign Fishes at Wansford, Capt. Vipan's Aquarium of, 541; Fish Culture, 134; National Fish Culture Association, 85, 299, 580, 609; Fish Culture at the Inventions Exhibition, 36, 63; Importation into England of German Carp, 553; Incubation of Salmon Ova by the N. F. C. Association for the Severn Fishery Board, 609; Fish Culture in Tasmania, Saville Kent, 634; Fisheries in America, Germany, Belgium, and Holland, Diminution of, 553; Origin of the Fishes of the Sea of Galilee, Prof. Hull, 563
- Fishermen, Superstitions of the Straits, 541
- Fitzgerald (Prof. Geo. Fras.), Sir Wm. Thomson and Maxwell's Electro-Magnetic Theory of Light, 4
- Five Mathematical Rarities, 30
- Fjords, How the North-Norway, were made, Karl Pettersen, 177
- Fleming (Dr. J. A.), a Form of Standard Daniell Cell, 263
- Fliers-en-Escrebieux, Earthquake at, 207
- Fletcher (James), Canadian Entomology, 111
- Fletcher (L.), Guide to the Universal Gallery of the British Museum (Natural History), 364
- Fletcher (Thos.), "Smokeless Houses and Manufactories," 134
- Flint-Knappers: A. J. Evans, F.S.A., on the Flint-Knappers' Art in Albania, 588
- Floating Dome, the Nice, 297
- Flora of Bank-Notes, 8
- Flora of Canada, Alfred W. Bennett, 294
- "Flora of the English Lake District," J. G. Baker, F.R.S., 75
- Flora of Tropical America, Mr. Lehmann's Researches into the, 514
- Floras, Mesozoic, of the Rocky Mountain Region of Canada, Sir William Dawson, F.R.S., 164
- Flying Fish, Alfred Carpenter, 147
- Flying Machines, L. Hargrave, 432
- Fœtus, Transmission of Pathogenetic Microbes by Mother to, Koubassoff, 432
- Fog, Preventing Collisions with Icebergs in a, Prof. Alex. Graham Bell, 273
- Fol et Sarasin (MM.), on the Depth to which the Sun's Light will penetrate into the Sea, 132
- Fol (Dr. Herman), "Lehrbuch der Vergleichenden Mikroskopischen Anatomie," Dr. E. Klein, 293
- Folk-Lore, the Ceylon "Orientalist," 208; J. Theodore Bent on Greek Insular Customs, 587
- Fontainebleau, Meteor seen at, E. P. Mounier, 496
- Foot of the Horse, on the Development of the, Prof. Struthers, 560
- Forbes (Henry O.), "Naturalist's Wanderings in the Eastern Archipelago," Alfred R. Wallace, 218; Expedition to New Guinea, 552
- Forbes (William Alexander), "In Memoriam," 387
- Forbes Memorial Volume, 387
- Forecasting by Means of Weather Charts, 392
- Forecasting of Barometric Variations, A. N. Pearson, 574
- Forel (Dr. F. A.), Sky-Glows, 173; Recent Earthquake in Switzerland, 295; Tremble-terre du 26 Septembre, 1885, 574; Sub-Lacustrine Ravines of Glacial Streams, 640
- Forest Cultivation from Seeds in Sweden, 230
- Forestry, School of, Sir John Lubbock's Proposal for a, 62
- Forests, Influence of, on Climate, 115
- Formosan Ethnology, 346
- Forster Herbarium, W. Botting Hemsley, 501
- Forth Bridge, Benjamin Baker, 430
- Fossil Flora of Carniola, the, Baron von Ettingshausen, 311
- Fossil Forests in Sweden, 402
- Fossil Insects, Dr. H. A. Hagen, 53
- Fossil Mammalia in the British Museum, Catalogue of, Part I., Richard Lydekker, 53; the Reviewer, 78
- Fossil Plants of the Tertiary and Secondary Beds of the United Kingdom, 504
- Foucault's Apparatus for the Measurement of the Velocity of Light, M. Wolf's Modification of, Albert A. Michelson, 6
- Fouqué's Electrical Apparatus for Registering Propagation of Earthquakes, 254
- Foul Water, W. H. Shrubsole, 223; Herbert C. Chadwick, 245; Isaac C. Thompson, 271
- Fowler, John, C. E., 426
- Fox (Dr. Courteney), on the Sequence of Mean Temperature and Rainfall in the Climate of London, 536
- France: Geographical Society, 281; Nineteenth Anniversary of the Institut, 578; Annual Meeting, 633; French Association, 252, 381; M. Giffard's Bequest for the Benefit of Science to the French Government, 541. See also Paris.

- Frankland (P. F.), the Removal of Micro-Organisms from Water, 262
- Fream (Prof. W.), Chemical Composition of American Grasses, Clifford Richardson, 525; Agricultural Grasses of the United States, Dr. Geo. Vasey, 525
- Freshwater Fauna, Silesian, Dr. O. Zacharias, 160
- Friedländer (Dr.), Carcinoma in Lungs, 191
- Fritsch (Prof.), the Functions of the Sebaceous Glands, 544
- Frog, the Eye of the, Dr. H. Virchow, 519
- Frost, Hoar, Mrs. Caroline W. D. Rich, 30
- Fuchs (Dr. Ernst), the Causes and the Prevention of Blindness, 623
- Fuel, Petroleum Gas used for, 463
- Fumariaceæ, British, the Caulotaxis of, Thomas Hick, 614
- "Furculum" or "Furcula," Dr. F. L. Slater, 466
- Furnace, an Experimental Cupola, J. Riley, 430
- Gadulus argenteus* and *Lumpenus lampetiformis* off Aberdeen, on the Occurrence of, Francis Day, 223
- Gaisberg, Proposed Air-Balloon Railway on the, 254
- Galloway (W.), Experiments with Coal-Dust at Neunkirchen, in Germany, 55; Watering the Coal-Dust in Mines, 171; Shot-Firing in Mines, 596
- Calton (Francis, F.R.S.), on Family Records, 507; Opening Address in Section II (Anthropology) at the British Association, 507
- Galvanometer, Prof. Anthony's Tangent, 634
- Games: J. W. Crombie on a Game with a History, 587
- Gangjee (Prof. Arthur, F.R.S.), "Text-Book of Pharmacology, Therapeutics, and Materia Medica," by Dr. T. Lauder Brunton, F.R.S., 337
- Garbett (E. L.), Recession of Niagara Falls in 133 Years, 244
- Gardner (Henry Dent), International Inventions Exhibition, 296
- Gardner (J. Starkie), "L'Évolution de Règne Végétal—Les Phanérogames," MM. Marion and Saporta, 289
- Gardner's Report on Manchuria, 428
- Garafowl, the Great Auk or, its History, Archaeology, and Remains, Symington Grieve, Prof. Alfred Newton, F.R.S., 545
- Garson (Dr. J. G.), the Lapps, 168; on Abnormal and Arrested Development as an Induction of Evolutionary History, 589
- Gas Fuel, Natural, 40
- Gas Lamp, Frederick Siemens's, 247
- Gas, Petroleum, Used in Ironworks, &c., at Pittsburg for Fuel, 463
- Gases, Dr. Agamemnone's Experiments on Density of, 48; the Condensation of, Herr Kayser, 160; Kinetic Theory of, Prof. Crum Brown, 352, 533
- Gasco (D. Antonio Suarez y D. Luis G.), "Lecciones de Coordinación con las Determinantes y sus principales aplicaciones," 411
- Gascony, the Sand-hills of, M. Cambrelent, 375
- Gastric Juice, Lactic Acid in the, Prof. Ewald, 24
- Gayal and Gaur, the, Zoology of Dr. Riebeck's "Chittagong Hill Tribes," W. T. Blanford, F.R.S., 243
- Gazetta Chimica Italiana, 359
- Gee (W. W. Haldane) and Prof. Balfour Stewart's "Elementary Practical Physics," 339
- Gegenbaur's Morphologisches Jahrbuch, 91
- Gei-ie (Arch., F.R.S.), "Deinocerata, a Monograph of an Extinct Order of Gigantic Mammals," Prof. O. C. Marsh, 97; Geological Survey of Belgium, 597
- Generalisations, Two, W. M. Flinders Petrie, 597
- Geneva, Meeting of the Astronomische Gesellschaft at, 278
- Geodetic Survey, United States Coast and, 572
- Geography: Notes on, 13, 63, 87, 209, 232, 281, 302, 356, 376, 403, 428, 464, 553, 581, 609, 611; Geographical Education in Sweden, 15; British Mission from India to Cashmere, 87; Geographical Society of Antwerp, 114; Projected New African Expedition by the Geographical Society, 184; Geographical Society of Australasia, 302; Geographical Society of Hamburg, 429; Geographische Blätter der Bremen Geographical Society, 233; a New Series of Geographical Text-Books, 353; Geographical Nomenclature, 356; Exploration of the Surinam River, 356; Exploration of the Orinoco, 356; Royal Geographical Society of Belgium, 356; Australian Expedition to New Guinea, 356; Geographical Neology and Neography, 356; What has been done for the Geography of Scotland, and what remains to be done, H. A. Webster, 565; Proposed Russian Expedition to the Amour, 495; Geography of the Caroline Islands, 464; Geography of the Pellew Islands, 464; Austrian Geographical Survey of Albanian Coast, 493; Address by Gen. J. T. Walker, F.R.S., at the British Association, 481; Major F. Bailey, on the Indian Forest School, 564; A. Hoie, on Journeyings in South-Western China, 564; Admiral Sir Erasmus Ommanney, F.R.S., Antarctic Discovery, 565; Cope Whitehouse, on Projected Restoration of the Keian Morris, and the Province, Lake, and Canals ascribed to the Patriarch Joseph, 565; E. G. Ravenstein, on Batho-Hypsographical Maps, with Special Reference to a Combination of the Ordnance and Admiralty Surveys, 565; H. A. Webster, What has been done for the Geography of Scotland, and what remains to be done, 565; John Rae, F.R.S., a Word or Two on the Best and Safest Route by which to Attain a High Northern Latitude, 566
- Geology: Geological Society, 22, 118, 189, 238, 310; Geologists' Association, 46, 190; the Continental Excursion of, 230, 298; Geological Magazine, 84, 252; the Relations between the Stages of the Terrestrial Cosmogony and the Geological Epochs, M. Faye, 132; Proposed Geological Survey of Mexico, 112; Geological Survey of Belgium, 154, 199; Dr. A. Geikie, F.R.S., 597; Geology of the Transvaal Gold Fields, W. H. Penning, 190; Herbert Goss on Fossil Insects from Carboniferous and Silurian Rocks, 190; Geological and Natural History Survey of Canada, Alfred R. C. Selwyn, F.R.S., 242; Geology of Prince Edward Island, Francis Bain, 259; International Geological Congress at Berlin, 278; Geological Congress at Berlin, 551; Geology of the Philippines, 302; Geology of the Breidden Hills, W. W. Watts, 310; Notes on Deep Boring at Richmond, Surrey, Prof. Judd, F.R.S., and C. Homersham, 310; Correlations of the "Curiosity-Shop" Beds, New Zealand, Capt. Hutton, 311; Geology in America, 374; "Annuaire Géologique Universel et Guide du Géologue autour de la Terre," Dr. Dagnincourt, 436; Address by Prof. J. W. Judd, F.R.S., at the British Association on, 453, 472; Geology of Antigua, Purves, 553; W. Whitaker, on Deep Borings at Chatham, a Contribution to the Deep Seated Geology of the London Basin, 555; Hugh Miller, on some Results of a Detailed Survey of the Old Coast-Lines near Trondhjem, Norway, 555; Dr. J. C. Howden, on the Glacial Deposits of Montrose, 555; G. H. Kinahan, on Irish Metamorphic Rocks, 555; Prof. Frank Clowes, on Barium Sulphate as a Cementing Material in Sandstone, 555; Sir Richard Owen, F.R.S., on American Evidences of Eocene Mammals of the "Plastic Clay" Period, 556; Dr. Max Schuster, on some Results of the Crystallographic Study of Danburite, 556; Edward Hull, F.R.S., Notice of an Outline Geological Map of Lower Egypt, Arabia Petraea, and Palestine, 556; Dr. R. H. Traquair, F.R.S., a Preliminary Note on a New Fossil Reptile recently discovered at New Spynie, near Elgin, 556; Rev. E. Hill, on the Average Density of Meteorites compared with that of the Earth, 556; Prof. Edward Hull, F.R.S., on the Occurrence of Lower Old Red Conglomerate in the Promontory of the Fanad, North Donegal, 556; Prof. T. G. Bonney, F.R.S., on Bastite-Serpentine and Troctolite in Aberdeenshire, with a Note on the Rock of the Black Dog, 555; Lieut.-Col. Playfair, on the Re-discovery of Lost Numidian Marbles in Algeria and Tunis, 556; Prof. A. Renard, on some Rock-Specimens from the Islands of the Fernando Noronha Group, 556; Prof. T. G. Bonney, F.R.S., on some Traverses of the Crystalline District of the Central Alps, 557; Prof. H. Carvill Lewis, on the Direction of Glaciation as ascertained by the Form of the Striae, 557; B. N. Peach and J. H. Horne, on the Geology of Durness and Eribohl, with Special Reference to the Highland Controversy, 558; Chas. Lapworth, on the Highland Controversy in British Geology—its Causes, Course, and Consequences, 558; W. Ivison Macadam, on Certain Diatomaceous Deposits (Diatomite) from the Peat of Aberdeenshire, 559; Prof. G. A. Lebour, on some Recent Earthquakes on the Downham Coast, and their Probable Causes, 559; Prof. H. Carvill Lewis, on some Examples of Pressure-Fluxion in Pennsylvania, 559; Geology of the Kerich Peninsula, Andrusoff on, 580; Application of Thermo-Chemistry to Explanation of



- Geological Phenomena, Dieulafoy, 592; Contradiction of Alleged Illegal Practices in the Geological Survey of the United States, 608; the North Atlantic as a Geological Basin, Mellard Reade, 609
- Geometry, Projective, Prof. Cremona's, 62
- Geometry, on Certain New Terms, or Terms used in a New or Unusual Sense in Elementary Universal, Prof. J. J. Sylvester, F.R.S., 576
- German Annexations in Pacific, the, 429
- German Anthropological Society, 85
- German Association of Naturalists and Physicians, the, 374
- German Mission to inquire into Salt Industry in Cheshire, 494
- German, &c., School Children, Proportion of, with Dark and Fair Complexion, 85
- Gheyn (M. van den), the European Origin of the Aryas, 114
- Giard's (M.), Bequest to French Government for the Benefit of Science, 541
- Giglioli (Dr. Italo), Disinfection of Sewers, 415
- Gilchrist Lectures Fund, the, 514
- Gill (Prof.), "Account of Progress of Zoology," 85
- Girard (A.), Rare Mathematical Book by, 30
- Glacial Deposits, Dr. J. C. Howden on the, of Montrose, 555
- Glacial Epoch in Australia, the Supposed, Capt. Hutton, 640
- Glacial Period in Australia, the, Dr. R. von Lendenfeld, 69
- Glaciation, Direction of, Prof. H. Carvill Lewis on the, as ascertained by the Form of the Striae, 557
- Glacier, What is a?, 300
- Glacier (Alaska), Movement of, 162
- Glacier in Chili, the Reported Discovery of a, 184
- Gladstone (Dr. J. H., F.R.S.), on the Specific Refraction and Dispersion of the Alums, 263; on Chemical Education, 325
- Glanville (Miss), her Catalogue of the Natural History Collections of the Albany Museum, Grahamstown, 30
- Glaser's New Expedition to Southern Arabia, 88, 233
- Glasgow University, the Chair of Botany at, 61
- Glasgow, Philosophical Society of, 212
- Glasgow, Among the Rocks Round, Dagald Bell, 624
- Glass, Spectra Produced in, by Scratching, E. F. J. Love, 270
- Gleazbrook (R. T., F.R.S.), on a Point in the Theory of Double Refraction, 538
- Glow, Sky: Dr. F. A. Forel, 173; Robt. C. Leslie, 245
- Glow, Sunset, Prof. Kiessling's Investigations of the late, J. Edmund Clark, 637
- Gold in British Borneo, 161
- Gold, History of a Lump of, from the Mine to the Mint, Alex. Watt, 340
- Gold in Corea, Discovery of, 403
- Goniometer, a New Form of Protractor and, W. F. Stanley, 402
- Gordon (Gen.), Message from, borne to Sweden by a Crane, 208
- Goss (Herbert), Fossil Insects from Carboniferous and Silurian Rocks, 190
- Gottsche (Prof.), Travels in Corea, 164, 232
- Gow (James), a Short History of Greek Mathematics, 1
- Gower (A. F.): Experiments in Aerial Navigation, 133; Supposed Loss of, 329
- Graber (Herr), Effects of Odorous Matters on Invertebrate Animals, 609
- Granada, Earthquake at, 609
- Grasses, Agricultural, of the United States, Dr. Geo. Vasey, Prof. W. Freese, 525
- Grassi Museum, Proposed, 160
- Graves (Robert Perceval), Life of Sir William Rowan Hamilton, 619
- Gravimetric Experiments on Action of Tidal Streams on Metals, Thos. Andrews, 189
- Gravitational Instruments, Constant, Sir William Thomson, F.R.S., 535
- Great Auk, or Garefowl, its History, Archaeology, and Remains, Symington Grieve, Prof. Alfred Newton, F.R.S., 545
- Great Ocean Basins, John Murray, 581, 911
- Greek Mathematics, a Short History of, James Gow, 1
- Greek Alphabet found in Italy, Signor Barnabei, 120
- Greek and Egyptian Pottery, the Connection of, 353
- Green Insular Customs, J. Theodore Bent on, 587
- Greenland, Proposed Fresh Danish Scientific Expedition to, 164; Danish Researches in, 256; Return of one of the Danish Expeditions to, 554
- Greenwich, Visitation of the Royal Observatory, 138
- Grenfell (Rev. G.), Return of, 64; Exploration of the Mobangi River, 281; Explorations in Congo Basin, 302
- Gresham College, 105
- Grieve (Symington), "The Great Auk, or Garefowl, its History, Archaeology, and Remains," Prof. Alfred Newton, F.R.S., 545
- Grisebach (A.), "Die Vegetation der Erde nach ihrer Klimatischen Anordnung," W. Botting Hemsley, 315; "Vegetation of the Earth," Dr. W. Engelmann, 366
- Growth of Cereals, 234
- Guessings at Truth, 152
- Guiana, British: E. F. in Thurn on the Red Men about the Koraima, 587
- Guiana, Condreau's Journeys in, 164; Andreau on the Prairies of, 164
- Guinea, Dutch, Exploration of the Surinam River, 356
- Guinea, New, Australian Expedition to, 356
- Günther (Dr. Albert, F.R.S.), Hume Collection of Asiatic Birds, 500
- Guy (W. A., F.R.S.), Death and Obituary Notice of, 493
- Gymnoid electricus, Viscera of, Prof. Cleland, 561
- Haan (Dr. Bieren de), Mathematical Reprints, 30
- Habenicht (Dr.), Proposal for Systematisation of Scientific Observations in Africa, 64
- Haberlandt (Dr. G.), "Physiologische Pflanzenanatomie im Grundriss dargestellt," 504
- Hackney Microscopical and Natural History Society, 182
- Hagen (Dr. H. A.), Fossil Insects, 53
- Hail, Red, C. Evans, 54; Prof. Théodore Schwedoff, 437
- Hainan, the Island of, Le Monnier on, 233
- Hair, Nerve-Sensitiveness of, Dr. Blaschko, 24; Development of, on the Human Body, 589
- Hall (A.), Stone Axes, Perak, 626
- Hall (H. S.) and S. R. Knight, "Elementary Algebra for Schools," 388
- Halle Verein für Erdkunde, 163
- Hamilton (D. J.), Is the Commissural Theory of the Corpus Callosum Correct?, 561
- Hamilton (Sir William Rowan), Life of, Robert Perceval Graves, 619
- Hawks (H. G.), Fourth Annual Report of the State Mineralogist of California, 100
- Hanksite, W. E. Hidden, 568
- Hann (Dr.), the Temperature of the Austrian Alps, 580
- Han-en (G. Armauer), "Den Norske Nordhavs-Expedition," 1876 to 1878, 51
- Hatari, Paulitschke and Hardegger's Journey to, 581
- "Harbours and Docks," L. F. Vernon-Harcourt, 291
- Harcourt (A. Vernon), on Photometry with the Pentane Standard, 537
- Harcourt (L. F. Vernon), "Harbours and Docks," 291
- Hargrave (L.), Flying Machines, 432
- Harker (Allen), Coloration of the Anterior Segments of the Maldanidae, 564
- Harting (J. E.), the New Bird in Natal, 6
- Hartley (Prof. W. N., F.R.S.), on Molecular Formule 87; Researches on the Relation between the Molecular Structures of Carbon Compounds and their Absorption Spectra, 93
- Hartog (Dr.), on the New Star in Andromeda, 460
- Harvard College Observatory, U.S., 37
- Harvard Photometry, the, 368
- Harvest in Algiers, Proposed Use of Electric Light for Night Work, 162
- Haskell (Geo.), Measurement of Evaporation, 357
- Hayercraft (Prof. J. Berry), a New Theory of the Sense of Taste, 562
- Hazen (H. Allen), Thunderstorms and Air-Pressure, 181
- Head as Developed in the Higher Vertebrates, Spiracle of Fishes in its Relation to the, Prof. Cleland, 561
- Health, Laws of, W. H. Corfield, 221
- Health Science, Manual of, Andrew Wilson, 221
- Heat, Radiant Light and, Prof. Balfour Stewart, F.R.S., 322, 389, 394, 413, 422, 550
- Heaton (Margaret), Sense of Colour, 626
- Hedley (William), the Inventor of Railway Locomotion on the Present Principle, M. Archer, 595

- Heights of Clouds, 630  
 Helimeter, Investigations with the, Dr. Elkin, 329  
 Hell Gate, the Blowing Up of, 552, 575; and Rackarock, Dr. H. Sprengel, F.R.S., 625  
 Helm-Wind, the, 23  
 Helmersen (G. P.), Obituary Notice of, 134  
 Helmholtz (Prof. von, F.R.S.), Sir William Thomson's "Mathematical and Physical Papers," 25; Wernicke's Experiments on the Reflection of Light, 312  
 Hemsley (W. Botting), Vegetation of the Earth, A. Grisebach, 315; the Forster Herbarium, 501  
 Henderson (J. R.), 181  
 Herat, Exploration of Afghan Frontier Commission of Country round, 164  
 Herbarium, the Forster, W. Botting Hemsley, 501  
 Hereditary Nature, Francis Galton, F.R.S., on, 507  
 Hereditiv, 543  
 Herendeen (Capt.), Prehistoric Structures in Micronesia, 13  
 Heures (Jean L.), an Ancient Sacrificial Stone of North-West Canada, 46  
 Heyes (J. F.), Statigrams, 597  
 Hick (Thomas), the Caulotaxis of British Fumariaceae, 614  
 Hicks (Prof. W. M.), on the Constitution of the Luminiferous Ether on the Vortex Atom Theory, 537  
 Hickson (Dr. Sydney J.), Botanical Gardens in Java, 576  
 Highland Controversy: Chas. Lapworth on the Highland Controversy in British Geology—its Causes, Course, and Consequences, 558  
 High-Level Meteorological Stations, Dr. A. Woeikof, 54  
 High-Pressure, Life of Aquatic Animals at, 399  
 Higher Mathematics, 302  
 Hildebrandson (Dr.), the Mean Direction of Cirrus Clouds over Europe, 190  
 Hill (Alex.), Evidence of Comparative Anatomy with regard to Localisation of Function in the Cortex of the Brain, 561  
 Hill (Rev. E.), on the Average Density of Meteorites compared with that of the Earth, 556  
 Hill Tribes, Chittagong, Dr. Emil Riebeck, 169  
 Hippisley (J.), Pulsation in the Veins, 389, 574  
 Histology, Essentials of, E. A. Schäfer, Dr. E. Klein, F.R.S., 388  
 Hoang-Ho Journey, Prievalsky's, 15  
 Hoar Frost, Mrs. Caroline W. D. Rich, 30  
 Höck (Dr. L.), "Die Nutzbaren Pflanzen und Tiere Amerikas und den alten Welt verglichen in Bezug auf ihren Kultureinfluss," 413  
 Hodgkinson (Alex.), Unusual Atmospheric Phenomenon, 173  
 Hoffmann (Dr. H.), "Resultate der wichtigsten pflanzenphysiologischen Beobachtungen in Europa nebst einer Frühlingskarte," 146  
 Hölzke (Dr.), Intra-ocular Pressure, 191; the Influence of Blood-Pressure on Intra-ocular Pressure, 336  
 Homersham (Collett), Notes on Deep Boring at Richmond, Surrey, 310  
 Homing Faculty of Hymenoptera, Dr. Geo. J. Romanes, F.R.S., 630  
 Hong-Kong Observatory, the, 84  
 Hopkinson (Dr. John, F.R.S.), Magnetisation of Iron, 68  
 Horse, on the Development of the Foot of the, Prof. Struthers, 560  
 Horsley (Victor), Motor Centres of the Brain and the Mechanism of the Will, 377  
 Hosie (A.), Chinese Insect Waite Wax, 562; Journeyings in South-Western China, 564  
 Horticultural Congress, Antwerp International Botanical and, 182  
 Howden (Dr. J. C.), on the Glacial Deposits of Montrose, 555  
 Howes (G. B.), "An Atlas of Practical Elementary Biology," 388  
 Hudson's Bay, Alert Expedition to, 114, 611  
 Huggins (Wm., F.R.S.), the New Star in Andromeda, 465  
 Hughes (W. R.), Fauna of the Seashore, 294  
 Hugo, Victor, 119  
 Hull (Prof. Edward, F.R.S.), Notice of an Outline Geological Map of Lower Egypt, Arabia Petraea, and Palestine, 556; on the Occurrence of Lower Old Red Conglomerate in the Promontory of the Fanad, North Donegal, 550; on the Cause of the Extreme Dissimilarity between the Faunas of the Pea Sea and the Mediterranean, 560; Origin of the Fishes of the Sea of Galilee, 563  
 Human Body, W. F. Stanley on a Portable Scale of Proportion of, 586  
 Humble-Bees, Dead, under Lime-trees, Edward Saunders, 427  
 Humboldt (Alexander von), the Primitive Peoples of America, 464  
 Hume Collection of Asiatic Birds, 317; Dr. Albert Günther, F.R.S., 500  
 Hunt (Arthur R.), Fauna of the Seashore, 390; Influence of Wave Currents on the Fauna of Shallow Seas, 547  
 Hunt (Cyril B. Holman), Larvæ of *Cerura vinula*, 574  
 "Hunterian Oration," John Marshall, F.R.S., 51  
 Hut Circles, Worthington G. Smith, 29  
 Hütterott (Herr), on the Japanese Sword, 635  
 Hutton (Capt.), Correlations of the "Curiosity-Shop" Beds, New Zealand, 311; the Supposed Glacial Epoch in Australia, 640  
 Huxley (Prof.), F.R.S., Honorary Degree of D.C.L. conferred on, 181; and the Normal School of Science, 327  
 Hybridisation of Salmonidæ at Howietoun, Francis Day, 562  
 Hydrocarbons at High Temperatures, on the Decompositions and Genesis of, L. H. E. Armstrong and A. K. Miller, 286  
 Hydrographical Bureau at Washington, 110  
 Hydrology and Climatology Congress, the, 84  
 Hydromechanics, 164  
 Hygiene: Principles of, Albert Carey, 221; Hygiene, Edward F. Willoughby, 221; a Manual of Health Science, A. Wilson, 221; Hygiene, a Manual of Personal and Public Health, Arthur Newsholme, 221; the Laws of Health, Dr. W. H. Corfield, 221  
 Hymenoptera, Homing Faculty of, Dr. Geo. J. Romanes, F.R.S., 630  
 Ibbetson (W. J.), Terminology of the Mathematical Theory of Elasticity, 76  
 Ice in Atlantic Ocean, Chart of the, 302  
 Ice (Floating) off Coast of Bergen, Unprecedentedly Early Appearance of, 515  
 Ice, Some Experiments on the Viscosity of, Prof. C. Lloyd Morgan, 16  
 Icebergs, Preventing Collisions with, in a Fog, Prof. Alex. Graham Bell, 273, 353; J. Joly, 367  
 Iceland: Avalanche in, 230; a Lava Desert in, Th. Thoroddsen, 403; Inclement Summer in, 427; Barley-Growing successfully attempted in, 494; a Lava Desert in the Interior of, Th. Thoroddsen, 554  
 Ichthyological Museum, the International, 580; Additions to, 634  
 Igneous Rocks, Prof. T. G. Bonney, F.R.S., on Bastite-Serpentine and Troctolite in Aberdeenshire, with a Note on the Rock of the Black Dog, 556  
 Illumination in a Fog, the Theory of, Lord Rayleigh, 22  
 Im Thurn (E. F.), on the Red Men about the Roraima in British Guiana, 587  
 Images, on Certain Spectral, produced by a Rotating Vacuum Tube, Shelford Bidwell, 30; Dr. Henry Muirhead, 55  
 Images, Ocular, and After-Images, W. M. Laurin, 197  
 Imaginary and Infinite, a New Example of the Use of the, in the Service of the Finite and Real, Prof. J. J. Sylvester, F.R.S., 103  
 Incandescent Lamps, Molecular Radiation in, Dr. J. A. Fleming, 263  
 India: the Zoology of the Indian Seas, 35; Wheat-Production in India, Prof. John Wrightson, 79; British Geographical Mission to, 87; Rains in, 218; Mr. Allan Hume's Ornithological Collection, 327; Earthquakes in Indian Archipelago, 427; Statistics of Rainfall in, 494; on Levelling Operations of the Great Trigonometrical Survey of India, Major A. W. Baird, 536; on the Development of Cholera in, Gustave Le Bon, 543; Indian Forest School, Major F. Bailey, 564; Archaeology in India, 634; Proposed Daily Synoptic Charts of the Indian Ocean from 1861, 502; on a Supposed Periodicity of the Cyclones of the Indian Ocean South of the Equator, Chas. Meldrum, F.R.S., 613; the Value of Indian Ink in Microscopy, Léo Errera, 37  
 India-rubber, on the Behaviour of Stretched, H. G. Madan, 625  
 Indiana, Proposed State Academy in, 633  
 Induction Machine, Wimshurst, Notes on the Action of, G. B. Buckton, F.R.S., 51

- Industrial Statistics, U.S., 369  
 Infinite and Imaginary, a New Example of the Use of the, in the Service of the Finite and Real, Prof. J. J. Sylvester, F.R.S., 103  
 Ingleby (Dr. C. M.), Composite Portraits, 224  
 "In Memoriam," William Alexander Forbes, 387  
 Inoculations, the Anti-Cholera, of Dr. Ferran, Dr. E. Klein, F.R.S., 617  
 Inoculation for Rabies, Pasteur, 633  
 Inorganic Analysis. Qualitative, a Treatise on Practical Chemistry and, Frank Clowes, 3  
 Insect Ravages, 524  
 Insect Wax, Chinese, R. McLachlan, F.R.S., 6  
 Insects' Eyes, Mr. Lowne on the Morphology of, Dr. E. A. Schäfer, F.R.S., 3  
 Insects, Fossil, Dr. H. A. Hagen, 53  
 Institut, Ninetieth Anniversary of the, 578  
 Institute of Chemistry, 609  
 Institution of Civil Engineers, 109  
 Institution of Mechanical Engineers, 20, 298, 343, 634  
 Instruments, Meteorological, 67  
 Integral Calculus, C. Carpmal, 258  
 Integrals, a New, D. Napoli and Abdank-Abakanowicz, 519  
 International Botanical and Horticultural Congress, Antwerp, 1885, Prof. W. R. McNab, F.R.S., 416  
 International Exhibition, Music Loan Collection, Dr. W. H. Stone, 174  
 International Meteorological Committee, 501  
 International Sanitary Conference in Rome, 217  
 International Telegraph Conference at Berlin, 353  
 Invention, an Earthquake, 222; Prof. John Milne, 573; Prof. C. Piazzi Smyth, 213, 625; D. A. Stevenson, 213  
 Inventions Exhibition, 8; the Aquarium at, 36; Fish-Culture at the, 63; Electricity at the, 106; Rats at, 112; Secondary Generators of Messrs. Gaulard and Gibbs at the, 225; Breeding of Dogfish at, 254; Henry Dent Gardner on the, 296; Black Bass at, 375; Restocking of the Aquarium, 541  
 Invertebrate Animals, Effects of Odorous Matters, Herr Graber, 609  
 Iona, Duke of Argyll, 413  
 Iridescent Crystals of Potassium Chlorate, H. G. Madan, 102; Prof. G. G. Stokes, 224  
 Iron: Iron and Steel Institute, 11, 38, 429; Meeting at Glasgow, 352; on the Structure of, and Steel, H. C. Sorby, F.R.S., 39; the Properties of Malleable, 40; Magnetisation of Iron, Dr. John Hopkinson, F.R.S., 68; Whether Known in America before Columbus, 110; the Lines of, Prof. Thalén, 253; Iron Trade of Scotland, J. Rowan, 429; an Experimental Cupola Furnace for Iron-Smelting, J. Riley, 430  
 Irving (Rev. A.), General Section of the Bagshot Strata, 22  
 Isis Scientific Society of Dresden, 111  
 Island of Hainan, Le Monnier on, 233  
 Isomerism, the Phenomena of, Prof. Butleroff on, 87  
 Isthmus of Panama, Piercing the, 370  
 Italy: Stone-Age Articles Discovered at Breonio Veronese, 47; Italian Scientific Expedition to Burmah, 87; Greek Alphabet Found in, Signor Barnabei, 120; Italian Geographical Society, 357; Two Early Italian Adventurers in South America, 376; the Topography of Italy under the Romans, 376; Rumoured Massacre of Massari's Italian African Expedition, 493; the Present State of Science in, 609; Italian Meteorological Society, 609; General Meeting at Florence, 207  
 Ivanoff (M.), the Pamir, 113  
 Ivens (Commander) and Capt. Capello, African Explorations of, 429  
 Izvestia of the Russian Geographical Society, 64, 113, 135, 163, 208  
 Jackdaws and Cholera, 400  
 Jagnaux (Raou) "Traité de Minéralogie Appliquée aux Arts, à l'Industrie, au Commerce, et à l'Agriculture," 28  
 Jamaica Institute, 182  
 Jamaica, Science in, Morris, 182  
 Jamieson (Prof. Andrew), Electrical Definitions, Nomenclature and Notation, 184  
 Janssen (Dr.), Universal Meridian, 148, 200; Experiments on the Influence of Gases in Spectrum Analysis, 400  
 Japan: Patent Law in, 208; Lepidoptera of Great Britain and Japan, compared, H. Pryer, 427; Earthquakes, Phenomena in, 526; Roman Lettering Adopted for Japanese Societies' Proceedings, 494; Japanese Tattooing, 566; Japanese Meteorological Observatory, 579; on the Japanese Sword, Herr Hütterott, 635  
 Java: the Recent Volcanic Eruptions in, 181; Meteorology in, 300; Volcanic Activity in, 401; Botanical Gardens in, Dr. Sydney J. Hickson, 576  
 Jenkin (Prof. Fleeming, F.R.S.), Obituary Notice of, 153  
 Jennings (Capt.), Return of, 88  
 Johns Hopkins University Circular, 110  
 Johnston-Lavis (Dr. H. J.), the New Outburst of Lava from Vesuvius, 55, 108  
 Joly (J.), Preventing Collisions with Icebergs, 367; on a Poto-meter made with Translucent Prisms, 537  
 Jones (Wm.), the Recovery of Tar and Ammonia from Blast Furnaces Fed with Raw Coal, 430  
 Jonköping, Remarkable Aerial Phenomenon at, 375  
 Journal of Anatomy and Physiology, 91, 591  
 Journal of Botany, 21, 189, 310, 614  
 Journal of Franklin Institute, 309  
 Journal of Physiology, 91, 591  
 Journal of the Royal Agricultural Society of England, 222  
 Journal of the Royal Microscopical Society, 116, 591  
 Journal of the Russian Chemical and Physical Society, 44, 213  
 Jubilee of the Statistical Society, 188  
 Judd (Prof. J. W., F.R.S.), Notes on Deep Boring at Richmond, Surrey, 310; Opening Address in Section C (Geology) at the British Association, 453; Presence of the Remains of Dicotyledon in the Triassic Sandstone of Elgin, 573  
 July Meteors, W. F. Denning, 342  
 Jumbo's Body, 541  
 Jump, Mechanism of the, Marey and Demeny, 432  
 Jupiter: W. F. Denning, 31; Recurrence of Markings on, W. F. Denning, 196; and Saturn, Mars, W. F. Denning, 548; Red Spot on, W. F. Denning, 626  
 Jupp (H.B.), August Meteors, 342  
 Kaiser (Dr. H.), "Die Determinanten, für den ersten Unterricht in der Algebra bearbeitet," 411  
 Kakké Disease, Discoveries as to Origin of, Dr. Wallace Taylor, 330  
 Karst, the Drainage of the, 88  
 Kassai River, 554; Discovery of Fall into Lake Leopold II. of, by Lieut. Weissmann, 495, 581  
 Katchin Tartars of Minusinsk, Customs of, 208  
 Kayser (Dr.), the Absorption of Carbonic Acid on Smooth Glass Surfaces, 72; Photographs of Lightning-Flashes, 111; the Condensation of Gases, 160; on an Advance in the Theory of Spectral Lines, 312  
 Keane (Prof. A. H.), the Lapps, 141, 168; Translation of Dr. Emil Riebeck's "Chittagong Hill Tribes," 169  
 Kekip-Sesoators of North-West Canada, the, 46  
 Kempe (A. B., F.R.S.), a General Theory of Mathematical Form, 237  
 Kennedy (Prof. Alex. B. W.), Nomenclature in Elasticity, 269  
 Keut (Saville), Fish-Culture in Tasmania, 634  
 Kerry-Nicholls (J. H.), the Maori Race, 93  
 Kertch Peninsula, Geology of the, Andrusoff, 580  
 Khiva, Dr. Henry Lansdell on, 194  
 Kiessling (J.), "Die Dämmerungserscheinungen im Jahre 1883 und ihre physikalische Erklärung," 321; Investigations into the Origin of the late Sunset-Glows, J. Edmund Clark, 637  
 Kilima-njaro, Exploration of, 530  
 Kinahan (G. H.), on Irish Metamorphic Rocks, 555  
 Kinetic, Prof. Clifford's, R. Tucker, 147  
 Kinetic Theory of Gases, Prof. Crum Brown, 352, 533  
 Klein (Dr. E., F.R.S.), Louis Pasteur—his Life and Labours, 146; Microtome's Vade-Mecum, Arthur Bolles, 147; "Lehrbuch der Vergleichenden Mikroskopischen Anatomie," Dr. Herman Fol, 293; "Essentials of Histology," E. A. Schäfer, 388; Anti-Cholera Inoculations of Dr. Ferran, 617  
 Klossowski on Thunderstorms in Russia, 160  
 Koffe-Cleaner, the "Sun," 542  
 Knight (S. R.), and H. S. Hall, Elementary Algebra for Schools, 388

- Koch's Microbe, on an Alkaloid extracted from Liquid used for Cultivation of, A. G. Pouchet, 432
- Koetschau, the Boiling for Scientific Purposes at, 162
- König (Dr.), New Spectro-Photometer, 191; Measurement of the Modulus of Elasticity, 36
- "Königliche Gesellschaft der Wissenschaften," 383
- Kopreinitz, Earthquake in, 231
- Korea, Dr. Gottsche's Exploration of, 154, 232
- Kossel (Dr.), Nucleine, 520
- Koubassoff, Transmission of Pathogenetic Microbes by Mother to Foetus and in Milk, 432
- Kowalewski (W.), on the Growth of Cereals, 234
- Kreischer (Prof. C. G.), Shot-Firing in Mines, 596
- Krakatau, Threatening State of, 161, 601
- "Kryptogamen Flora von Schlesien," Dr. J. Schröter, 76
- Kuldja, Dr. Henry Lansdell on, 194
- Kurile Islands, Prof. Milne, 209; Notes on the, Milne and Snow, 135
- Labour Exhibition at Paris, 401
- Lacquer, the Chemistry of Japanese, Hikorokuro, Yoshida, 190
- Lactic Acid in the Gastric Juice, Prof. Ewald, 24
- Lady Curator, a, E. L. Layard, 30
- Lagneau, Mediæval Anesthetics, 301
- Laing (Jeanie M.), on the Modes of Grinding and Drying Corn in Old Times, 587
- Lake District, Flora of the English, J. G. Baker, F.R.S., 75
- Lake-Dwellings, Ancient British, Dr. R. Munro on the Archaeological Importance of, 588
- Lake George, Rainfall of, 236
- Lamp, Gas, Frederick Siemens's, 247
- Lancashire, Birds of, F. S. Mitchell, 241
- Landmark (Prof.), the Capability of Salmon to Jump Waterfalls, 329
- Langley (S. P.), Sunlight and the Earth's Atmosphere, 17, 40
- Language of Signs used by Oriental Traders, J. Menges, 231
- Lankester (Prof. E. Ray, F.R.S.), Value of a Marine Laboratory to the Development and Regulation of our Sea Fisheries, 65; "Bronn's Classen und Ordnungen des Thierreichs," 145
- Lansdell (Rev. Dr. Henry), Fauna of Russian Central Asia, 56; "Russian Central Asia, including Kuldja, Bokhara, Khiva, and Merv," 194
- Laos, M. P. Neis on, 166
- Lapps, the, Prof. A. H. Keane, 14; Dr. Garson and Prof. Keane, 168
- Lapworth (Chas.), on the Highland Controversy in British Geology—its Causes, Course, and Consequences, 558
- Larmor (J.), on Molecular Distances in Galvanic Polarisation, 536
- Larvæ, Phytophagous, the Essential Nature of the Colouring of, E. B. Poulton, 91
- Larvæ of *Cerura vinula*, Cyril B. Holman Hunt, 574
- Lassar (Dr.), Preparations of Skin of Lichen Ruber Patients, 544
- Last (J. T.), Projected New African Expedition, 184
- Latitude of Solar Macule, &c., Distribution in, Signor Tacchini, 120
- Laurin (W. M.), Ocular Images and After-Images, 197
- Lava from Vesuvius, the New Outburst of, H. J. Johnston-Lavis, 55
- Lava Desert in Interior of Iceland, a, Th. Thoroddsen, 403, 554
- Lawton's Method of Preventing Collisions with Icebergs, 353
- Laws (Dr. Robert), on the Manners and Customs of the Bantu Tribes of Lake Nyasa, 589
- Laws of Health, W. H. Corfield, 221
- Layard (E. L.), a Lady Curator, 30
- Lean (William Scarnell), Recent Earthquakes, 175
- Lebanon, Expedition of Dr. Noetting to, 11
- Le Bon (Gustave), on Development of Cholera in India, 543
- Leboulleux (L.), "Traité Élémentaire des Déterminants," 411
- Lebour (Prof. G. A.), on Some Recent Earthquakes on the Downham Coast and their Probable Causes, 559
- Lectures (Science), at Victoria Hall, 514; Penny Science, 609
- Lehmann (F. C.), Return to America of, 514
- Leibnitz, Observations of the Temperature of the Sea and Air made during a Voyage from England to the River Plate in the s.s., J. Y. Buchanan, 126
- Leipzig, Proposed Grassi Museum at, 160
- Leicester Literary and Philosophical Society, 635
- "Leitfaden bei zoologisch-zoologischen Präparirungen," A. Mojsisovics Edlen von Mojsvár, 171
- Lena, the Delta of the, 16; Record of Temperature at the Polar Station, 16
- Lenape Stone; or the Indian and the Mammoth, H. C. Mercer, Dr. E. B. Tylor, F.R.S., 593
- Lendenfeld (Dr. R. von), the Glacial Period in Australia, 69; the Phoria-pongia, 119; the Auleniina, 639
- Lenz (Dr. Oscar), his African Expedition, 357
- Leo (Dr.), on the Formation and Conveyance of Fat in Phosphorus-Poisoning, 120
- Lepidoptera of Great Britain and Japan compared, H. Pryer, 427
- Lesley (Prof. J. P.), Address to the American Association for the Advancement of Science, 511
- Le-lie (Robt. C.), Sky-Glows, 245
- Less (Dr.), the Markings of the Barograph during Thunderstorms, 72
- Lesseps (Ferdinand de), on the Water-Supply of the Desert Tracts of Southern Tunis, 281
- Lewis (Prof. H. Carvill), on the Direction of Glaciation as Ascertained by the Form of the Striae, 557; on Some Examples of Pressure-Fluxion in Pennsylvania, 559
- Lewis (T. C.), Artificial Earthquakes, 295; Tertiary Rainbow, 523, 626
- Libraries, Colonial Public, J. R. Boosé, 183
- Lichen Ruber Patient, Dr. Lassar's Preparations of Skin of, 544
- Lick Observatory, the, 320
- Life of Aquatic Animals at High Pressure, 399
- Light: Sir Wm. Thomson and Maxwell's Electro-Magnetic Theory of, Prof. Geo. Fras. Fitzgerald, 4; M. Wolf's Modification of Foucault's Apparatus for the Measurement of the Velocity of, Albert A. Michelson, 6; the Action of, in diminishing the Electrical Resistance of Selenium, Shelford Bidwell, 167; as a Means of Investigation, Prof. G. G. Stokes, on, Prof. P. G. Tait, 361; Radiant Light and Heat, Prof. Balfour Stewart, F.R.S., 322, 389, 394, 413, 422, 550; B. A. Report on Standards of White Light, 529; a Standard of Light, J. Trowbridge, 568
- Lightning, Ocular After-Images and, Shelford Bidwell, 101; A. S. Davis, 126
- Lightning Flashes, Photographs of, Dr. Kayser, 111
- Lightning, Trees struck by, in Richmond Park, 460
- Lightning, Causes of Liability of Certain Trees to be struck by, Percy Smith, 494
- Lime-trees, Dead Humble bees under, Edward Saunders, 427
- Lindsay (Miss Beatrice), on the Development of the Sternum in Birds, 540
- Linnaeus, the Statue of, 110
- Linnean Society of New South Wales, 73, 119, 287, 615, 639
- Linnean and Old Herbaria, Application of Anatomical Method to the Determination of the Materials of the, Prof. L. Radlkofer, 563
- Little Knott, the Diorite of, Prof. T. G. Bonney, F.R.S., 189
- Lipporwans, the, Dr. Polek, 429
- Liquids, Dilatation of, Prof. Mendeléeff on Formulae of, 87
- Liquids, Determination of Some Co-efficients of Friction, &c., 518
- Liquids, the Spheroidal State of, Luvini, 635
- Liquid Films, Prof. A. W. Rüchler, F.R.S., 210
- Liquefying Oxygen, New Process of, M. L. Cailliet, 584
- Liverpool Naturalists' Field Club, 231
- Lizards in the British Museum, Catalogue of, George Albert Boulenger, 49
- Lloyd (J. U.), Spreading of Various Saline Solutions on Filter Paper, 87
- Lockhart's (Col.) Oxus Expedition, 429
- Locomotion, Human: Mechanism of the, Marey and Demy, 432
- Locomotion of Animals, the, Dr. Mullenhoff, 496
- Locomotive, the Compound, 197
- Lodge (Prof. Oliver), Notes for the Opening of a Discussion on



- Electrolysis, to be held in Section B, at the British Association in Aberdeen, September, 1885, 458
- Loew (Dr. Oscar), a Chemical Difference between Living and Dead Protoplasm, 563
- London, Teaching University for, 255
- London, University of, 289
- London Mathematical Society, 608
- Long (James), British Dairy Farming, Prof. John Wrightson, 571
- Long Sight, A. Shaw Page, 103
- Love (E. F. J.), Spectra Produced in Glass by Scratching, 270
- Lovell (I.), Recent Earthquakes, 175
- Lowe (H. F.), Decomposition of Carbonic Acid by Electric Spark, 287
- Lowe (Mr.), on the Morphology of Insects' Eyes, Dr. E. A. Schäfer, F.R.S., 3
- Lubbock (Sir John, F.R.S.), on Science, 11; Proposal for School of Forestry, 62; the Neglect of Science in Public Schools, 552
- Lucas (Dr. Robert), Electrical Phenomenon in Mid-Lothian, 343
- Lumber Trade in America, 207
- Luminiferous Ether, on the Constitution of the, and the Vortex-Atom Theory, Prof. W. M. Hicks, 537
- Lummer (Dr.), Observations on Interference-Phenomena produced by Glasses Parallel to the same Plane, 311
- Lumpeus lumpeiformis* and *Gadiculus argenteus* off Aberdeen, on the Occurrence of, Francis Day, 223
- Land, University of, 112
- Lungs, Bacillary Phthisis of the, Germain Sée, 341
- Lavini, the Spheroidal State of Liquids, 635
- Lydekker (Richard), Catalogue of Fossil Mammalia in the British Museum, Part I., 53
- McCormick Observatory, the, 84
- McIntosh (Prof. W. C., F.R.S.), Opening Address in Section D (Biology), at the Meeting of the British Association, 476; on St. Andrews Marine Laboratory, 563
- McKendrick (Prof.), on the Action of Cold on Microphytes, 561
- McLachlan (R., F.R.S.), Chinese Insect Wax, 6; Sunsets, 437
- McMunn (Dr.), on the Chromatology of Actiniae, 68; Enterochlorophyll, 69
- McNabb (Prof. W. R., F.R.S.), International Botanical and Horticultural Congress, Antwerp, 1885, 416
- Macadam (W. Ivison), on Certain Diatomaceous Deposits (Diatomite) from the Peat of Aberdeenshire, 559
- Machine, Notes on the Action of the Wilmshurst Induction, G. B. Buckton, F.R.S., 51
- Mackay (J. S.), "Key to the Elements of Euclid," 388
- Maclay (Mikluho), Reports of Outcome of his Travels, 35
- Macleay Fellowships at Sydney University, 230
- Macoun (John), Catalogue of Canadian Plants, 242
- Madan (H. G.), Iridescent Crystals of Potassium Chlorate, 102; on Cases of the Production of Ohm's (Langberg's) Ellipses by Biaxial Crystals, 414; on the Behaviour of Stretched India-rubber, 625
- Madras, Meteorology in, 541; Professorship of Biology at, 181
- Magnetisation, the Changes Produced in Length of Metal Rods by, Shelford Bidwell, 45, 167
- Magnetisation of Iron, Dr. John Hopkin on, F.R.S., 68
- Magnetism and Electricity, W. G. Baker, 340
- Malaga, Earthquake near, 329
- Malay Peninsula; the "Sakei" Aborigines, 428
- Maldanide, Colouration of the Anterior Segments of the, Allen Harker, 564
- Male Sole is not Unknown, Francis Day, 78
- Mammalia, Fossil, in the British Museum, Catalogue of, Part I., Richard Lydekker, 53; the Reviewer, 78
- Mammoth, an Old Drawing of a, Baron A. E. Nordenskjöld, 228
- Man, Isle of, the Antiquities of, Prof. Boyd Dawkins, 579
- Man, Tertiary, M. de Mortillet, 494
- Man, New, of Mentone, Thomas Wilson, 588
- Man: Prof. D. J. Cunningham on Certain Points of Comparison between the Chimpanzee and, 588
- Man (Edward Horace), Aboriginal Inhabitants of the Andaman Islands, 409; on the Nicobar Islands, 589
- Manchester Literary and Philosophical Society, 46
- Manchester and District Association of Science and Art Teachers, 300
- Manchuria, Report on, Gardner, 428
- Maori Race, the, J. H. Kerry-Nicholls, 93
- Marey and Demeny, the Mechanism of the Jump, 432
- Marine Algae, Notes on, Edw. Batters, 101
- Marine Biological Association, the, 61; State Aid to, 278
- Marine Fish-Culture, 609
- Marine Laboratory, Value of a, to the Development and Regulation of our Sea Fisheries, Prof. E. Ray Lankester, F.R.S., 65
- Marine Station, Scottish, J. P. Cunningham, 176
- Marine Zoology: Proposed Exploration of the Indian Seas, 35
- Marion (M.) and M. Saporta, "L'Évolution du Règne Végétal—Les Phanérogames," J. Starkie Gardner, 289
- Markings on Jupiter, Recurrence of, W. F. Denning, 196
- Marlborough College, Science at, 401
- Mars, Jupiter, and Saturn, W. F. Denning, 548
- Marsh (Prof. O. C.), "Deinocerata, a Monograph of an Extinct Order of Gigantic Mammals," Arch. Geikie, F.R.S., 97; Size of the Brain in Extinct Animals, 562
- Marshall (John, F.R.S.), "Hunterian Oration," 51
- Martin (Sidney), Digestion of Proteids in Plants, 563
- Mason (Sir Josiah), Statue of the late, 552
- Mason (Prof. O. T.), Summary of Anthropological Work for 1884, 355
- Mason Science College, Birmingham, 427
- Massari's Italian African Expedition, Rumoured Massacre of, 493
- Massowah, Erection of Meteorological Station of, 11
- Materia Medica, Text-Book of Pharmacology, Therapeutics, &c., Dr. T. Lauder Brunton, F.R.S., Prof. Arthur Gamgee, F.R.S., 337
- Mathematics: a Short History of Greek, James Gow, 1; The late Prof. Clifford's Papers on Mathematics, 4; Sir William Thomson's "Mathematical and Physical Papers," Prof. Helmholtz, F.R.S., 25; Five Mathematical Rarities, 30; Mathematical Society, 70, 118, 167; Terminology of the Mathematical Theory of Elasticity, W. J. Ibbetson, 76; William Sutherland, 391; Henry Muirhead, 439; a General Theory of Mathematical Form, A. B. Kempe, F.R.S., 237; Higher Mathematics, 302; American Journal of Mathematics, Pure and Applied, 364; Address on, at the British Association, by Prof. G. Chrystal, M.A., F.R.S.E., 446; Prof. Crum Brown, on the Kinetic Theory of Gases, 533; Sir William Thomson, on Constant Gravitational Instruments, 535; Prof. Osborne Reynolds, on the Dilatancy of Media Composed of Rigid Particles in Contact, 535; Prof. Pirie, on Calculating the Surface-Tensions of Liquids by Means of Cylindrical Drops or Bubbles, 536; Prof. Pirie, on the Surface-Tension of Water which contains a Gas dissolved in it, 536; Lord Rayleigh, on the Thermodynamic Efficiency of Thermopiles, 536; J. Larmor, on Molecular Distances in Galvanic Polarisation, 536; J. T. Bottomley, on Cooling of Wires in Air and Vacuum, 536; Major A. W. Baird, on Levelling Operations of the Great Trigonometrical Survey of India, 536; Mr. A. Buchan, on the Rainfall of the British Islands, 536; W. H. Preece, on a Remarkable Occurrence during the Thunderstorm of August 6, 1885, 536; A. Buchan, on the Meteorology of Ben Nevis, 536; Dr. Courtney Fox, on the Sequence of Mean Temperature and Rainfall in the Climate of London, 536; W. H. Preece, on Domestic Electric Lighting, 537; Discussion on Standards of White Light, 537; A. Vernon Harcourt, on Photometry with the Pentane Standard, 537; Prof. W. M. Hicks, on the Constitution of the Luminiferous Ether on the Vortex Atom Theory, 537; J. Joly, on a Photometer made with Translucent Prisms, 537; R. T. Glazebrook, on a Point in the Theory of Double Refraction, 538; Prof. W. F. Barrett, on a New and Simple Form of Calorimeter, 538; Vuibert's Journal de Mathématiques Élémentaires, 609
- Matter, Properties of, Prof. Tai's, Lord Rayleigh, F.R.S., 314
- Maxim Gun, 21
- Maxwell's, Sir William Thomson and, Electro-Magnetic Theory of Light, Prof. Geo. Fras. Fitzgerald, 4
- Measure of Fidget, 174

- Measurement of Degrees in Europe, Publication of the Norwegian Commission of the, 547  
 Mechanical Engineers, Institution of, 20, 343  
 Mechanical Telephone, W. J. Millar, 316  
 Mechanism of the Will, Motor Centres of the Brain and the, Victor Horsley, 377  
 Mechanism of the Pump, Marey and Demyen, 432  
 Medicine in Dundee, Proposed School of, 254  
 Medicine, the Low Popular Estimate of, Dr. Quain, 608  
 Mediterranean Coast, Morphology of the, Dr. Fischer, 163  
 Mediterranean Coral Trade, the, 36  
 Mediterranean and the Red Sea, on the Cause of the Extreme Dissimilarity between the Faunas of the, Prof. E. Hull, F.R.S., 560  
 Meerens on Standard Musical Pitch, 9  
*Megaloglossus Woernmanni*, 374  
 Meldola (Prof. R.), Colours of Arctic and Alpine Animals, 172  
 Melting and Boiling-Point Data, T. Carnelley, 364  
 Mendenhall (Prof. T. C.), 81; a Differential Resistance-Thermometer, 567  
 Mendeléeff (Prof.), on Formulæ of Dilatation of Liquids, 87  
 Menges (J.), Language of Signs used by Oriental Traders, 231  
 Mentone, a New Man of, Thomas Wilson on, 588  
 Mercer (H. C.), "The Lenape Stone; or, the Indian and the Mammoth," Dr. E. B. Tylor, F.R.S., 593  
 Meridian, Universal, Dr. Jansen, 148, 200  
 Meridional Oscillation of the Auroral Zone, Eleven-Year, E. Douglas Archibald, 414  
 Merriam (Dr. C. H.) and Economic Ornithology, 329  
 Merv Oasis, Baron Benoist-Méchin's Travels in, 209  
 Mesozoic Floras of the Rocky Mountain Region of Canada, Sir William Dawson, F.R.S., 164  
 Metal Rods, the Changes produced by Magnetisation on Length of, S. Bidwell, 45  
 Metals, Action of Tidal Streams upon, Thos. Andrews, 189  
 Metallurgy, the Development of Technical Instruction in, Prof. Chandler Roberts, F.R.S., 608  
 Metamorphic Rocks, G. H. Kinahan on the Irish, 555  
 Metamorphism, Regional, Prof. Prestwich, F.R.S., 214  
 Meteorology, 252, 253; Erection of Meteorological Station at Massowah, 11; Work of the Observatory Department of South Australia, 12; High-Level Stations, 54; Meteorological Instruments, 67; Meteorology of the China Seas, 84; New Meteorological Station on the Tyrolean Alps, 133; Meteorological Society of Vienna, 133; the International Committee of Meteorology, 160; Meteorology of Bombay, 170; Meteorology in America, 181; the Mean Direction of Cirrus Clouds over Europe, Dr. Hildebrandson, 190; General Meeting at Florence of the Italian Meteorological Society, 207; Berlin Meteorological Society, 239; Dr. Neuhaus's Observations, 239; Rainfall of Southern India and Burmah, 278; Curious Phenomena at Stockholm, 279; New Station in Northern Queensland, 279; Stonyhurst College Observatory, 300; Meteorology in Java, 300; Cyclones in United States, 328; Weather of Southern Norway, 354; Cyclones in Sweden, 355; Remarkable Aërial Phenomenon at Jonköping, 375; Cloud-Measurement by Theodolites, 400; Meteorological Observatories at Pekin, 403; Meteorology in Switzerland, 426; Storms on Atlantic Coast of United States, 427; Congress of Meteorologists at Munich, 460; Average Velocities of Typhoons, 453; Statistics of Rainfall in East Indian Archipelago, 494; International Meteorological Committee, 501; Proposed Observatory near Chepstow, 503; Observations on Ben Nevis, 529; Meteorology of Ben Nevis, A. Buchan, 536; on the Rainfall of the British Islands, A. Buchan, 536; Meteorology in Madras, 541; Japanese Meteorology, 579; the Jesuit Establishments near Shanghai, 579; Scottish Meteorological Society, 636  
 Meteors: at Soedertelje, near Stockholm, 230; W. F. Denning, 597; April, W. F. Denning, 5; July, W. F. Denning, 342; August, H. B. Jupp, 342; W. F. Denning, 415; Meteor observed at Fontainebleau, E. P. Mounier, 496; Meteor seen at Stockholm, 515; Comet 1866 and the Meteors of November 14, 610  
 Meteoric Cycle and Stonehenge, R. Edmonds, 436  
 Meteoric Dust, B. A. Report on, 529  
 Meteoric Formations in Mexico, M. Violet d'Aouest, 376  
 Meteoric Stone found in Sweden, 36  
 Meteorites: Rev. E. Hill on the Average Density of Meteorites compared with that of the Earth, 556; Theoretical Views on the Detonation of, Bombicci, 633  
 Mexico, Proposed Geological Survey of, 112; Bursting of a Waterspout in, 133; Meteoric Formations in, M. Violet d'Aouest, 376  
 Michelson (Albert A.), M. Wolf's Modification of Foucault's Apparatus for the Measurement of the Velocity of Light, 6  
 Microbe, Koch's, on an Alkaloid Extracted from Liquid and in Cultivation of, A. G. Pouchet, 432  
 Microbes, Pathogenetic, on the Transmission from Mother to Fœtus, and in Milk of, Koubassoff, 432  
 Micronesia, Prehistoric Structures in, Capt. L. U. Herendeen, 13  
 Micro-Organisms, the Removal from Water of, P. F. Frankland, 262  
 Microbe-Organisms and Albumen in Solution, Action of Ozonised Air upon, J. J. Coleman, 561  
 Microphytes, Action of Cold on, Prof. M'Kendrick, 561  
*Micropterus phaeops*, Nesting of, Chas. Bingham, 52  
 Microscopes, Theiler's, 112  
 Microscopic Drawings, Rochfort Connor, 633  
 Microscopic Preparations of the Skin, Drs. Blaschko and Lassar, 544  
 Microscopical Investigation of Vegetable Substances, Guide for the, Dr. W. J. Behrens, 193  
 Microscopy, the Value of Indian Ink in, Léo Errera, 37  
 Microtome's Vade-Mecum, Arthur Bolles, Dr. E. Klein, F.R.S., 147  
 Mid-Lothian, Electrical Phenomenon in, Dr. Robert Lucas, 343  
 Migratory Birds, Early Departure from Sweden of, 427  
 Mikroskopischen Anatomie, Lehrbuch der Vergleichenden, Dr. Herman Fol, Dr. E. Klein, 293  
 Miles (Manly), Unconscious Bias in Walking, 293  
 Milford Haven, an Encysting Myxostoma in, P. Herbert Carpenter, 391  
 Mill (H. R.), on the Temperature of the Water at Firth of Forth, 70  
 Miller (A. K.) and H. E. Armstrong, on the Product of Gas Manufacture from Petroleum, 286  
 Miller (Hugh), on Some Results of a Detailed Survey of the Old Coast Lines near Trondhjem, Norway, 555  
 Millar (W. J.), Mechanical Telephone, 316  
 Milne (Prof. John), on the Observation of Earth-Tips and Earth-Tremors, 259; an Earthquake Invention, 573  
 Milne and Snow, Notes on the Kurile Islands, 135  
 Mimicry, Singular Case of, Graciano A. de Azambuja, 366  
 Mine to the Mint, History of a Lump of Gold from the, Alex. Watt, 340  
 Mineralogie, Lehrbuch der, Dr. Gustav Tschermak, 3  
 Minéralogie Appliquée aux Arts, à l'Industrie, au Commerce, et à l'Agriculture, Raoul Jagnaux, 28  
 Mineralogy in California, H. G. Hanks, 100  
 Mineralogy and Chemistry, Original Researches in, J. Lawrence Smith, 3  
 Minerals of British Borneo, 161  
 "Mineral Resources of the United States," A. Williams, 341  
 Mineral Products of the United States, 404  
 Mines, Shot-Firing in, W. Galloway, 596; Prof. C. G. Kreischer, 596  
 Minima of Algol, 86  
 Minor Planet, New, 464  
 Minot (Dr. Chas. Sedgwick), the New Endowment for Research, 297  
 Mirage in the Baltic, 112; in Sweden, 231, 279, 541, 552; in Dorsetshire, Rev. M. F. Billington, 552  
 Mississippi, Protection against Tornadoes on the, 279  
 Missionary, Protestant, Educational Work in China, 35  
 Mitchell (F. S.), the Birds of Lancashire, 241  
 Mittheilungen der Wiener Geographische Gesellschaft, 581  
 Mobangi River Exploration, 281  
 Model University, a, 367  
 Modulus of Elasticity, Dr. König on, 360  
 Mojsvár (A. Mojsisovics Edlen von), "Leitfaden bei zoologisch-zoologischen Präparirungen," 171  
 Molecular Distances in Galvanic Polarisation, J. Larmor, 538  
 Molecular Formulæ, Hartley, 87  
 Molecular Structure of Carbon Compounds and their Absorption Spectra, Researches on the Relation between the, Prof. W. N. Hartley, F.R.S., 93

- Mollusca of the United States, 460  
 Monkeys and Water, Jerry Barrett, 367  
 Monnier (Le), on the Island of Hainan, 233  
 Montrose, Dr. J. C. Howden on the Glacial Deposits of, 555  
 Monuments, General Pitt-Rivers on the Preservation of, 587  
 Morgan (Prof. C. Lloyd), Some Experiments on the Viscosity of Ice, 16  
 Morphology of Insects' Eyes, Mr. Lowne on, Dr. E. A. Schäfer, F.R.S., 3  
 Morphology of the Mediterranean Coasts, Dr. Fischer, 163  
 Morphologisches Jahrbuch, 591  
 Morris, on Science in Jamaica, 182  
 Moseley (Prof. H. N., F.R.S.), "Den Norske Nordhavs-Expedition, 1876-1878," Zoologie Pennatulida, 74; Fauna of the Seashore, 212, 243, 417  
 Mosquitoes, Destruction of Young Trout by, 515  
 Mosso (Prof.), Respiration, 47  
 Motor Centres of the Brain and the Mechanism of the Will, Victor Horsley, 377  
 Mott (Henry A., Jun.), "Fallacy of the Present Theory of Sound," Dr. W. H. Stone, 75  
 Mouchez, Application of Photography to Mapping of Stars, 70  
 Mounier (E. P.), Meteor seen at Fontainebleau, 495  
 Mountain, the Highest, in Sweden, 404  
 Muir (M. M. Pattison), an Introduction to the Study of the Compounds of Carbon or Organic Chemistry, Prof. Ira Remsen, 99  
 Muir (Wm.), Earthquake-Proof Buildings, 245  
 Muirhead (Dr. Henry), Spectral Images, 55; on the Terminology of the Mathematical Theory of Electricity, 437  
 Muirhead (John), Death of, 540  
 Mull, Acclimatisation of Whitefish in, 515  
 Mullan (R. A.), Red Hail, 54  
 Müllenhoff (Dr.), the Locomotion of Animals, 496  
 Munk (Dr. J.), on the Formation of Fat in the Animal Body, 335  
 Munro (Dr. R.), on the Archaeological Importance of Ancient British Lake-Dwellings and their Relation to Analogous Remains in Europe, 588  
 Murché (Vincent T.), Botany, a Specific Subject of Instruction in Public Elementary Schools, 222  
 Murray's (Dr.), English Dictionary, 159  
 Murray (John), Great Ocean Basins, 581, 611  
 Museums, Overcrowding of, 12  
 Museums, the Author of "Museums of Natural History," 103  
 Museums, North American, 381  
 Mushrooms, Wild Edible, Dr. Olsen, Studies of, 162  
 Music Loan Collection, International Exhibition, Dr. W. H. Stone, 174  
 Musical Pitch, Standard, 9  
*Mustela itatsi*, H. Pryer, 110  
 Myzostoma, an Encysting, in: Milford Haven, P. Herbert Carpenter, 391  
 Nachtigal (Dr. Gustav): Death of, 14; Proposed Monument to, 134, 184, 581; the African Natural History Collections of, 493  
 Nadaillac (Marquis de), Prehistoric America, Dr. E. B. Tylor, F.R.S., 593  
 Namaland or Namaqualand?, Dr. Schinz, 581  
 Names of Places, Native, New System of Orthography for, 244  
 Naples, Zoological Table at, 506  
 Napoli (D.), a New Integrator, 519  
 Nasini, on Atomic Refraction of Sulphur in Various Compounds, 87  
 Natal, New Bird in, J. E. Harting, 6  
 National Academy of Sciences, the, 35  
 National Academy of Sciences, Composite Portraits of Members of the, Raphael Pumpelly, 176  
 National Fish Culture Association, 134  
 Native Names of Places, System of Orthography for, 199, 244  
 Natural Gas Fuel, 40  
 Natural History Survey of Canada, Geological and, Alfred R. C. Selwyn, F.R.S., 242  
 Natural History, Guide to the Universal Gallery of the British Museum, L. Fletcher, 364  
 Natural History Collections of Dr. Nachtigal, the African, 493  
 Natural History Museum, Additions to the, 493  
 Naturalist's Societies, Scotch Union of, 85  
 "Naturalist's Wanderings in the Eastern Archipelago," Henry O. Forbes, Alfred R. Wallace, 218  
 Naukratis, W. M. Flinders Petrie on the Discovery of, 588  
 Naval Construction, the Directorship of, 374, 552  
 Navigation, Inland, Exhibition of Plans, &c., Connected with, at Brussels, 35  
 Nebula in Andromeda, Lord Rosse, F.R.S., 437  
 Nebulae, New, 38  
 Needs, Our Present, 433  
 Negritos of the Philippines, 232  
 Neis (M. P.), on Laos, 166  
 Neolithic Age, Prof. Pigorini on the Worship of Stone Weapons in the, 48  
 Neptune, Prof. Pickering's Observation of, 12; Satellites of Uranus and, 553  
 Nerve-Endings, Dr. Benda's Preparations of Sensory and Motory, 520  
 Nesting of *Micropternus phaeocephs*, Chas. Bingham, 52  
 Netto (Ladislau), the Artificial Hill of Pacoval, Brazil, 408  
 Neuhauss (Dr.), Meteorological Observations, 239  
 Neunkirchen, in Germany, Experiments with Coal-Dust at, W. Galloway, 55  
 Neva, Soroloff's Analyses of Water of, 13  
 Nevada, Silver-Lead Deposits of Eureka, J. S. Curtis, 50  
 New Departure for the University of London, 265  
 New Guinea Exploration, Proposed Expeditions, 64; the Proposed Dutch Expedition to New Guinea, 87, 302; the Australian New Guinea Expedition, 403; H. O. Forbes's Expedition to, 552; Recent Explorations in, Coultts Trotter, 611  
 New Nebulae, 38  
 New South Wales, Royal Society of, 234; Linnean Society of, 238  
 New Spynie, Dr. R. H. Traquair, F.R.S., a Preliminary Note on a New Fossil Reptile Recently Discovered at, 556  
 New Star in Andromeda, Lord Rosse, F.R.S., 465; Dr. Wm. Huggins, F.R.S., 465; W. F. Denning, 465; J. Edmund Clark, 499; A. A. Common, F.R.S., 522; Geo. M. Seabroke, 523; A. Ricco, 523  
 New York, Submarine Earthquake at, 494  
 New Zealand, the Ruahine Range, 108; Central Solar Eclipses in, 86  
 Newall (H. Frank), on Certain Stages of Ocular After Images, 77  
 Newcomb (Prof. S.), 375  
 Newsholme (Arthur), Hygiene—a Manual of Personal and Public Health, 221  
 Newton (Prof. Alfred, F.R.S.), "The Great Auk or Garefowl, its History, Archaeology, and Remains," Symington Grieve, 545  
 Newton (Howard), Timbers of the Straits Settlements, 160  
 Niagara: Preservation of Falls of, 131; the Rate at which they Recede Southwards, Edward Wesson, 229; E. L. Garbett, 244; the International Park at, 252  
 Nice Floating Dome, the, 297  
 Nice Observatory, Bischoffsheim's Floating Telescope Dome for, 62  
 Nicobar: E. H. Man on the Nicobar Islanders, 589  
 Nightjar, the Standard-Winged, J. E. Harting, 6  
 Nissen (Capt.) and Chronometer Observatories in Kiel and Hamburg, 230  
 Nitrates in Human Body, Dr. Weyl, 191  
 Nitrogen and Oxygen, Extraction of, from Atmospheric Air, 354  
 Noetling (Dr.), Expedition to Lebanon, 11  
 Nomenclature of Tonquin, Eccentricities of European, 15  
 Nomenclature and Notation, Electrical Definitions, Prof. Andrew Jamieson, 184  
 Nomenclature in Elasticity, Prof. Alex. B. W. Kennedy, 269; Robert E. Baynes, 316  
 Nordenskjöld (Baron A. E.), an Old Drawing of a Mammoth, 228  
 Nordland Coast, Rumoured Appearance of the Sea-Serpent off, 462  
 Norfolk and Norwich Naturalists' Society, 580  
 Normal Metamorphism, 214  
 Normal School of Science, Prof. Huxley, F.R.S., Dean of, 327

- Norske Nordhavs-Expedition, den 1876-78, G. Armauer Hansen, 51; Zoologie Pennatulida, Prof. H. N. Moseley, F.R.S., 74
- North American Museums, 381
- North American Water-Birds, Prof. S. F. Baird, Dr. T. M. Brewer, and R. Ridgway, 521
- North Cape, Dispute as to Proprietorship of, 302
- North-Norway Fjords, how the, were made, Karl Pettersen, 177
- North-West England, Rainfall of, Alf. O. Walker, 271
- Northern Latitude, High, a Word or Two on the Best and Safest Route by which to Attain a, John Rae, F.R.S., 565
- Norway: Rainfall in, 37; Government Endowment of Research in, 207; Marked Salmon taken in, 300; Weather of Southern, 354; Inclement Summer in, 427; July Weather in Southern, 542; Pennatulida of the Norwegian North Atlantic Expedition, Prof. H. N. Moseley, F.R.S., 74; Norwegian Expedition to Finnmarken, 114; Biological Station at Christiania, 280; Norwegian Testimony to the Aurora Sound, Dr. Sophus Tromholt, 499; Publication of the Norwegian Commission on the Measurement of Degrees in Europe, 547
- Nova of 1572, Tycho's, 162
- Nova of 1670, Anthelm's, 355
- Nucleine, Dr. Kossel, 520
- "Nutzbaren Pflanzen und Tiere Amerikas und den alten Welt verglichen in Bezug auf ihren Kultureinfluss, Die," Dr. L. Höck, 413
- Numidian Marbles, Lieut.-Col. Playfair on the Rediscovery of, in Algeria and Tunis, 556
- Nuova Scienza, La, 516
- Nuovo Giornale Botanico Italiano, 21
- Nyassa (Lake), Dr. Robert Lawes on the Manners and Customs of the Bantu Tribes of, 589
- Observation of Earth-Tips and Earth-Tremors, on the, Prof. John Milne, 259
- Observatories: Harvard College, U.S., 37; the Ben Nevis Meteorological, 61, 252; the Hong Kong, 84; Opening of the Leander McCormick, 84; Observatory of Paris, 112; Visitation of the Royal Observatory, Greenwich, 138; Cambridge Observatory, 253; Stonyhurst College, 300; the Lick, 320; Cincinnati, 356
- Occultation, Daylight, of Aldebaran, 86, 183, 610
- Occultations of Vesta, 355
- Ocean Basins, Great, John Murray, 581, 611
- Oceans of Water, Air, and Ether, Wave of Translation in the, J. Scott Russell, F.R.S., 546
- Ocular After-Images, on Certain Stages of, H. Frank Newall, 77
- Ocular After-Images and Lightning, Shelford Bidwell, 101; A. S. Davis, 126
- Ocular Images and After-Images, W. M. Laurin, 197
- Odell (W.), the Three First Years of Childhood, Bernard Perez, 412
- Odorous Matters on Invertebrate Animals, Effects of, Herr Graber, 609
- Ohm, Determination of the, Self Induction in Relation to Certain Experiments of Mr. Willoughby Smith and to the, Lord Rayleigh, F.R.S., 7
- "Ohm's (or Langberg's) Ellipses," on Cases of the Production of, by Biaxial Crystals, H. G. Madan, 414
- Old Red Conglomerate, Lower: Prof. Edward Hull, F.R.S., on the Occurrence of, in the Promontory of the Fanad, North Donegal, 556
- Olsen's (Dr.) Studies of Wild Edible Mushrooms, 162
- Olsen (Herr A.), Effort at Teaching the Public of Christiania Practical Astronomy, 133
- Ommanney (Admiral Sir Erasmus, F.R.S.), Antarctic Discovery, 565
- Oology: Collection of Birds' Eggs at Upsala, 280
- Ophiuchi, Binary-Star 70, 402
- Optics: Intraocular Pressure, Dr. Hölzke, 191; Observations on Interference-Phenomena Produced by Glasses Parallel to the same Plane, Dr. Lummer, 311; Werricke's Experiments on the Reflection of Light, Prof. von Helmholtz, 312; the Influence of Blood-Pressure on Intraocular Pressure, Dr. Hölzke, 336; Experiments on Double Refraction, D. S. Stroumblo, 432
- Orbits, Cometary, 162
- Orchid Exhibition, 79
- O'Reilly (Prof. J. P.), Aurora, 54
- Organic Analysis, Commercial, Alfred H. Allen, 410
- Organic Chemistry, Prof. Ira Remsen, M. M. Pattison Muir, 99
- "Orientalist," the Ceylon, 208
- Oriental, Baldness among, Herr Schweiger, 35
- Origin of the Cereals, 116
- Origin of Thunderstorm Electricity, on the, Prof. L. Sohncke, 406
- Orinoco, Chaffanjon's Mission on the, 184; Exploration of the, 356
- Ornithology, 119; Woodpeckers Nesting in Ants' Nests, 52; Notes on *Mustela itasi* and *Corvus japonensis*, H. Pryer, 110; a Query as to Swallows, 197; the Birds of Lancashire, F. S. Mitchell, 241; Collection of Birds' Eggs at Upsala, 280; Allan Hume's Indian Ornithological Collection, 327; Economic Ornithology in United States, 329; Ornithology in United States, 461; Miss Beatrice Lindsay on the Development of the Sternum in Birds, 540
- Orthography, New System of, for Native Names of Places, 199, 244
- Ortolan Bunting in Scotland, Capture of, 119
- Osteology, Dr. Dudgeon's Chinese Translation of Holden's, 514
- Otago University Museum, Notes from the, Prof. T. Jeffery Parker, 586
- Outburst of Lava from Vesuvius, the New, H. J. Johnston-Lavis, 55
- Owen (Sir Richard, F.R.S.), on American Evidence of Eocen: Mammals of the "Plastic Clay" Period, 556
- Oxelösund, Mirage seen at, 231
- Oxus, Col. Lockhart's Expedition, 429
- Oxygen, Combustion of Phosphorus and Carbon in, H. B. Baker, 87
- Oxygen, New Process of Liquefying, M. L. Cailliet, 584
- Oxygen and Nitrogen, Extraction of, from Atmospheric Air, 354
- Oysters out of Water, Longevity of, Prof. Verrill, 404; Resting Position of, J. T. Cunningham, 597; Col. H. Stuart-Wortley, 625
- Ozone at Sea, Dr. W. J. Black, 416
- Ozonised Air, Action of, upon Micro-Organisms and Albumen in Solution, J. J. Coleman, 561
- Pacific, the German Annexations in, 429
- Page (A. Shaw), Long Sight, 103
- Pacoval, the Artificial Hill of, L. Netto, 408
- Pagenstecher (Dr.), on a New Species of Frugivorous Bat (*Megaloglossus woermanni*), 374
- Palat's (Lieut.) Mission to the Sahara, 302
- Palermo, Earthquake at, 609
- Palestine, the Survey of, 506
- Pamir, Recent Explorations of the, 59; Ivanoff, 113; Topography of the, Kosyakoff, 163
- Panama, Isthmus of, Piercing the, 370
- "Papuan and Melanesians," Robidee van der Aa, 16
- "Paradise Found," Wm. F. Warren, L.L.D., 28
- Parasites, Animal, of the Sugar Cane, H. Ling Roth, 268
- Paraxanthine and Heteroxanthine, Dr. Salomon, 496
- Paris: Academy of Sciences, 23, 47, 70, 94, 119, 144, 168, 190, 216, 238, 263, 288, 311, 384, 408, 432, 495, 519, 543, 568, 591, 616, 640; Academy of Sciences Biennial Prize Awarded to Dr. Brown-Séquard, 208; Geographical Society, 14, 113, 164, 302, 357; Polytechnic School, 61; Labour Exhibition, 401; Observatory of Paris, 112; Experiments on Cremation of Body in Common Stove, 161; Electric Lighting in, 514; Arrival of Thirteen Young Canadians for Study at, 636
- Parker (Prof. T. Jeffery), Notes from the Otago University Museum, 586
- Pasteur (Louis), his Life and Labours, Dr. E. Klein, F.R.S., 146; on Inoculation for Rabies, 633
- Patent Law in Japan, 208
- Patents, Report of Comptroller-General of, 253
- Patriarch Joseph, Province, Lake, and Canals ascribed to the, Cope Whitehouse, 565
- Paulitschke and Hardegger's Journey to Harar, 581



- Peach (B. N.) and J. Horne, on the Geology of Durness and Eriboll, with Special Reference to the Highland Controversy, 558
- Pearson (A. N.), Forecasting of Barometric Variations, 574
- Peat : W. Iverson Macadam on Certain Diatomaceous Deposits (Diatomite) from the Peat of Aberdeenshire, 559
- Pekin, Astronomical and Meteorological Observatories at, 403
- Pel Poisoning Case : Experiments as to Possibility of Burning a Body in Common Stove, 161
- Pellew Islands, the, 464
- Pelvic Brim, Prof. Turner on the Index of, as a Basis of Classification, 586
- Penfold (S. L.), Analcite Crystals, 554
- Pennatulida of the Norwegian North Atlantic Expedition, Prof. H. N. Moseley, F.R.S., 74
- Penning (W. H.), Geology of the Transvaal Gold-fields, 190
- Penny Science Lectures, 609
- Pentane Standard, Photometry with the, A. Vernon Harcourt, 537
- Perak, Stone Axes, A. Hall, 626
- Pereyaslavtseff (Miss), on the Development of Rotifers, 579
- Perez (Bernard), the Three First Years of Childhood, W. Odell, 412
- Periodical Comets of De Vico and Barnard, 183
- Periodical Comets in 1886, 636
- Periodicals, Catalogue of Scientific, H. C. Bolton, 426
- Periodicity of the Cyclones of the Indian Ocean South of the Equator, on a Supposed, Chas. Meldrum, F.R.S., 613
- Perkin (Dr.), on the Coal-Tar Colours, 303, 330
- Perouse (La), Discovery of the Relics of the Companions of, in the Expedition of 1782, 210
- Persia, Statistics of Population of, 64
- Persia, South-Eastern, Capt. Jennings' Exploration of, 88
- Perthes of Gotha, the History of the Great Geographical House of, 554
- Perturbations, Telegraphic, a Yearly and a Daily Period in, Dr. Sophus Tromholt, 88
- Petals, Stamens of, J. C. Coster, 53
- Petermann's Mittheilungen, 88, 184, 356, 554
- Petrie (W. M. Flinders), his Collection of Egyptian Antiquities, 353; on the Discovery of Naukratis, 588; Two Generalisations, 597
- Petroleum, Plutarch on, W. H. Deering, 29
- Petroleum, Products of Gas Manufacture from, H. E. Armstrong and A. K. Miller, 286
- Petroleum Gas used by Ironworks, &c., at Pittsburg for Fuel, 463
- Pettersen (Karl), How the North-Norway Fjords were Made, 177
- Phenology : "Resultate der wichtigsten pflanzen-phänologischen Beobachtungen in Europa nebst einer Frühlingskarte," Dr. H. Hoffmann, 146
- Phanerogams, Evolution of the, MM. Marion and Saporta, J. Starkie Gardner, 289; Prof. W. C. Williamson, F.R.S., 364
- Pharmacology, Therapeutics, and Materia Medica, Text-Book of, Dr. T. Lauder-Brunton, F.R.S., Prof. Arthur Gamgee, F.R.S., 337
- Phenols of Complex Function, Berthelot, 592
- Phenomenon, Electrical, J. B. A. Watt, 316
- Philadelphia, Zoological Society of, 85
- Philippines : the Negritos of the, 232; the Geology of the, 302
- Philological Society's English Dictionary, 159
- Philosophical Society of Glasgow, 212
- Phoraspogon, the, Dr. R. von Lendenfeld, 119
- Phosphorus, Combustion of, in Oxygen, H. B. Baker, 87
- Phosphorus-Poisoning, on the Formation and Conveyance of Fat in, Dr. Leo, 120
- Photographing the Aurora Borealis, Carl Siewers, 29
- Photography : Balloon, 420; Application of Photography to Mapping of Stars, Mouchez, 70; Photographs of Lightning-Flashes, Dr. Kayser, 111; Balloon Ascent for Photography, Gaston Tissandier, 182; Photographs of Animals in Movement, Dr. Müllenhoff, 496; Spectral Photometric Researches on some Photographic Sensitizers, 519; Photographic Society, 552; Photographic Action on Ebonite, Edward E. Robinson, 626
- Photometer Made with Translucent Prisms, J. Joly, 537
- Photometry, the Harvard, 368
- Photometry with the Pentane Standard, A. Vernon Harcourt, 537
- Phthisis of the Lungs, Bacillary, Germain Sée, 341
- Physical Society, 22, 70, 167, 191, 215, 263
- Physical and Mathematical Papers, Sir Wm. Thomson's, Prof. Helmholtz, F.R.S., 25
- Physics, Lessons in Elementary Practical, Prof. Balfour Stewart, F.R.S., and W. W. Haldane Gee, 339
- Physics and Engineering at University College, the Chair of, 54
- Physiology : Physiological Society of Berlin, 239; W. Preyer, on Physiology of the Embryo, F. J. Allen, 267; Dr. J. Munk on the Formation of Fat in the Animal Body, 335; on the Influence of Cortex Cerebri on Temperature of Human Body, Prof. Eulenburg, 496; Pischel's Preparations of the Thyroid Gland, 496; Dr. Benda's Preparations of Sensory and Motory Nerve-Endings, 520; Physiology of the Sense of Smell, Herr Aronsohn, 520; Dr. Biondi on the Origin of the Spermatozooids, 544; the Functions of the Sebaceous Glands, Prof. Fritsch, 544; "Physiologische Pflanzenanatomie in Grundriss dargestellt," Dr. G. Haberlandt, 594
- Pickering's (Prof.) Observations on Neptune, 12
- Pigorini (Prof.), on the Stone Age Articles Discovered at Breonio Veronese, 47; the Worship of Stone Weapons in the Neolithic Age, 48
- Pilcomayo River, Col. Feilberg's Exploration of, 64
- Pinto (Major Serpa), Discovery of Coal-fields in Africa by, 164
- Pirie (Prof.), on Calculating the Surface-Tensions of Liquids by Means of Cylindrical Drops or Bubbles, 536; on the Surface Tension of Water which contains a Gas Dissolved in it, 536
- Pischel (Herr), on the Development of the Thyroid Gland, 496
- Pisciculture, 375, 402; Shad-Rearing in United States, 112; in Scotland, 298; Ova of Dogfish at Royal Aquarium, 515; Acclimatisation of Whitefish in Mull, 515
- Pishpek, Earthquake at, 329
- Pitch, Standard, 9
- Pitcher Plant, 295; W. Watson, 341
- Pitt-Rivers (Gen.), on the Preservation of Ancient Monuments, 587
- Place, System of Orthography for Native Names of, 199, 244
- Plant Anatomy, Physiological, 594
- Plant, Pitcher, 295; W. Watson, 341
- Plants, Catalogue of Canadian, John Macoun, 242
- Plants in South Australia, Culture of Useful, 462
- Plants, Digestion of Proteids in, Sidney Martin, 563
- Plants and Drugs, New Commercial, Thos. Christy, 125
- "Plastic Clay" Period, Sir Richard Owen, F.R.S., on the American Evidences of Eocene Mammals of the, 556
- Platinoid, Electric Resistance of, J. T. Bottomley, 166
- Playfair (Sir Lyon, F.R.S.), on Science, 433; Inaugural Address at the Meeting of the British Association at Aberdeen, 438
- Playfair (Lieut.-Col.), on the Rediscovery of Lost Numidian Marbles in Algeria and Tunis, 556
- Pliocene Deer, Contributions to History of, W. B. Dawkins, F.R.S., 118
- Plutarch on Petroleum, W. H. Deering, 29
- Poison of the Cobra di Capello, on the, Herr Gnezda, 71
- Pol-Lias, Bran de, Return of, 581
- Polakowsky (H.), the Historical Value of the "Araucana," 429
- Polakowsky's (Dr.) Explorations in Costa Rica, 184
- Polar Temperatures, Lena, Record of, 16
- Polarisation, on Molecular Distances in Galvanic, J. Larmor, 536
- Polek (Dr.), the Lipiporwans, 429
- Port Hamilton Islands, 209
- Portraits, Composite, of Members of the National Academy of Sciences, Raphael Pumpelly, 176; John Cleland, 197; Dr. C. M. Ingleby, 224
- Portuguese Explorations in Africa, 429
- Post-Existence, Pre-Existence and, of Thought, Dr. Hyde Clarke, 102
- Posthumus (N. W.), Death of, 254
- Potani's Last Voyage to China, 135
- Potash, Chlorate of Iridescent Crystals of, H. G. Madan, 102; Prof. G. G. Stokes, 224
- Pouchet (A. G.), on an Alkaloid Extracted from Liquid used in Cultivation of Koch's Microbe, 432

- Poulton (E. B.), the Essential Nature of the Colouring of Phytophagous Larvæ, 91  
 Pozzo (Enrico dal), "Un Capitolo de Psicofisiologia," 413  
 Practical Physics, Lessons in Elementary, Prof. Balfour Stewart, F.R.S., and W. W. Haldane Gee, 339  
 Pre-Existence and Post-Existence of Thought, Dr. Hyde Clarke, 102  
 Preece (W. H., F.R.S.), "On Charging Secondary Batteries," 142; on a Remarkable Occurrence during the Thunderstorm of August 6, 1885, 536; on Domestic Electric Lighting, 536  
 Prehistoric America, Marquis de Nadaillac, Dr. E. B. Tylor, F.R.S., 593  
 Prehistoric Burial-Grounds, T. A. Archer, 548  
 Prehistoric Cemetery, 518  
 Prehistoric Remains in Switzerland, 84  
 Present Needs, Our, 433  
 Preservation of Niagara, 131  
 Pressure-Fluxion, Prof. H. Carvill Lewis on some Examples of Pressure-Fluxion in Pennsylvania, 559  
 Prestwich (Prof., F.R.S.), on Regional Metamorphism, 214  
 Preyer (W.), "Specielle Physiologie des Embryo," F. J. Allen, 267  
 Prime Meridian Question, the French View of the, 159  
 Primitive Peoples of America, the, Alexander von Humboldt, 464  
 Primitive Races, on the Manifestation of the Æsthetic Faculty among, Dr. D. Wilson, 259  
 Prisms, on the Use of Carbon Bisulphide in, Dr. Henry Draper, 67  
 Prisms, on a Photometer made with Translucent, J. Joly, 537  
 Prjevalsky (Col.), his Hoang-Ho Journey, 15, 63, 253; Thibet Expedition, 493, 635  
 Proceedings of the Boston Natural History Society, 519  
 Proceedings of the Linnean Society of New South Wales, 591  
 Proceedings of the Royal Society of Queensland, 495  
 Products, Mineral, of the United States, 404  
 "Properties of Matter," Prof. Tait's, Lord Rayleigh, F.R.S., 314  
 Proposed Change in the Astronomical Day, a, M. D. Downing, 523  
 Proteids in Plants, Digestion of, Sidney Martin, 563  
 Protoplasm, Chemical Difference between Living and Dead, Dr. Oscar Loew, 563  
 "Protozoa," Bütschli's, Prof. E. Ray Lankester, F.R.S., 145  
 Protractor and Goniometer, a New Form of, W. F. Stanley, 402  
 Pryer (H.), Notes on *Mustela itatsi* and *Corvus japonensis*, 110; Lepidoptera of Great Britain and Japan compared, 427  
 Psicofisiologia, un Capitolo di, Enrico dal Pozzo, 413  
 Ptomaines, Prof. Brieger on the, 239  
 Public Opinion and State Aid to Science, 497  
 Pulsation in the Veins, 437; J. Hippisley, 389, 574; Dr. J. W. Williams, 466  
 Pumpelly (Raphael), Composite Portraits of Members of the National Academy of Sciences, 176  
  
 Quain (Dr.), on the Low Popular Estimate of Medicine, 608  
 Qualitative Inorganic Analysis, a Practical Treatise on Practical Chemistry and, Frank Clowes, 2  
 Quarterly Journal of Microscopical Science, 116, 591  
 Quatrefages (M. de), the Red Indians, 164  
 Queensland, Northern, Meteorological Station in, 279  
 Queenwood College Mutual Improvement Society, 553  
 Question of Civil and Astronomical Time, 245  
 Quinquefoliate Strawberry, E. Lewis Sturtevant, 126  
  
 Rabbits in the Western Islands, Are there? Herbert Ellis, 575  
 "Rabenhorst's Kryptogamen Flora von Deutschland, Oesterreich, und der Schweiz," 101  
 Rabies, Pasteur on Inoculation for, 633  
 Rackarock, the Hell Gate Explosion and, Dr. H. Sprengel, F.R.S., 625  
 Radau (R.), Elements of Brooks's Comet, 543  
 Radiant Energy Recorder, on a, Prof. J. W. Clark, 233, 343  
 Radiant Light and Heat, Prof. Balfour Stewart, F.R.S., 322, 389, 394, 413, 422, 550  
 Radiant Matter Spectroscopy, W. Crookes, F.R.S., and M. Lecoq de Boisbaudran, 283  
 Radiation, Molecular, in Incandescent Lamp, Dr. J. A. Fleming, 263  
 Radlkofer (Prof. L.), Application of the Anatomical Method to the Determination of the Materials of the Linnean and Old Herbaria, 563  
 Rae (John, F.R.S.), a Word or Two on the Best and Safest Route by which to attain a High Northern Latitude, 565  
 Railway Congress at Brussels, 401  
 Railway Locomotion on the Present Principle, William Hedley the Inventor of, M. Archer, 595  
 Railway Sleepers, the Question of Metal, 401  
 Rainbow, B. de Spinoza's Work on the, 30  
 Rainbow Phenomenon, Chas. Croft, 30; Prof. Silvanus P. Thompson, 54  
 Rainbow, Tertiary, T. C. Lewis, 523, 626  
 Rainfall in Norway, 37  
 Rainfall of N.W. England, Alf. O. Walker, 271  
 Rainfall for 1884, British, G. J. Symons, 463  
 Rainfall in East Indian Archipelago, Statistics of, 494  
 Rainfall in the Climate of London, on the Sequence of Mean Temperature and, Dr. Courtney Fox, 536  
 Rainfall of the British Islands, A. Buchan, 536  
 Rains in Eastern Asia, Extraordinary, 461  
 Range, the Ruahine, New Zealand, 108  
 Rarities, Five Mathematical Book, 30  
 Rats at Inventions Exhibition, 112  
 Raudnitz (Dr.), a Vasomotor Centre in Cortex and Cerebrum, 119  
 Ravenstein (E. G.), Batho-Hypsographical Maps, with Special Reference to a Combination of the Ordnance and Admiralty Surveys, 565  
 Rayleigh (Lord, F.R.S.), Self-Induction in Relation to Certain Experiments of Mr. Willoughby Smith and to the Determination of the Ohm, 7; the Theory of Illumination in a Fog, 22; on a Monochromatic Telescope, 22; Prof. Tait's "Properties of Matter," 314; on the Thermodynamic Efficiency of Thermopiles, 536  
 Rays, Red, after Sunset, Geo. F. Burder, 466  
 Reactions, Chemical, Influence of Dilution and Excess on, Urech, 87  
 Reade (Mellard), the North Atlantic as a Geological Basin, 609  
 Reading School, Opening of Chemical Laboratory at, 328  
 Reale Accademia dei Lincei, 47  
 Recorder, Radiant Energy, Prof. J. W. Clark, 233, 343  
 Red Glows, Prof. Riccio, 120  
 Red Hail, C. Evans, 54; Prof. Théodore Schwedoff, 437  
 Red Indians, the, M. de Quatrefages, 164  
 Red Men, E. F. im Thurn on the, about the Roraima, 587  
 Red Rays after Sunset, Geo. F. Burder, 466  
 Red River Route to South-West China, 554  
 Red Sea and the Mediterranean, on the Cause of the Extreme Dissimilarity between the Faunas of the, Prof. E. Hull, F.R.S., 560  
 Red Spot on Jupiter, W. F. Denning, 626  
 "Reeckening van Kansen," 30  
 Refraction, Atomic, of Sulphur in Various Compounds, Nasini, 87  
 Refraction, Double, Experiments on, D. S. Stroumbo, 432; on a Point in the Theory of, R. T. Glazebrook, F.R.S., 538  
 Regional Metamorphism, by Prof. Prestwich, F.R.S., 214  
 Reian Meers, Projected Restoration of the, and the Province, Lake, and Canals ascribed to the Patriarch Joseph, Cope Whitehouse, 565  
 Reichardt (Dr. H. W.), Death of, 328  
 Rensen (Prof. Ira), an Introduction to the Study of the Compounds of Carbon on Organic Chemistry, M. M. Pattison Muir, 99  
 Renard (Prof. A.), on some Rock Specimens from the Islands of the Fernando Noronha Group, 556  
 Rendiconti della R. Accademia delle Scienze di Bologna, 1884-85, 335  
 Rendiconti del R. Istituto Lombardo, 45, 68, 117, 214, 237, 310, 359, 384, 568  
 Reports of the United States Commission of Fish and Fisheries for 1881-82, J. T. Cunningham, 79  
 Research, Zoological, 43  
 Research, the New Endowment for, Dr. Chas. Sedgwick Minot, 297

- Respiration, Prof. Mosso, 47  
 Resting Position of Oysters: J. T. Cunningham, 597; Col. H. Stuart Wortley, 625  
 Revue d'Anthropologie, 615  
 Rey (Dr. Philippe), on the Weight of the Cerebral Lobes, 615  
 Reynolds (Prof. Osborne, F.R.S.), on the Steam Indicator, 137; on the Dilatancy of Media Composed of Rigid Particles in Contact, 535  
 Rhine, the, Opening of Direct Steam Traffic between Cologne and Sea, 164  
 Rhodium, Three New Compounds of, 359  
 Ricco (Prof. R.), Red Glows, 120; New Star in Andromeda, 523  
 Rich (Mrs. Caroline W. D.), Hoar Frost, 30  
 Richardson (Clifford), Chemical Composition of American Grasses, Prof. W. Fream, 525  
 Richmond Park, Trees Struck by Lightning in, 460  
 Richmond, Surrey, Notes on Deep Boring at, Prof. Judd, F.R.S., and C. Homersham, 310  
 Ridgway (R.), "Water-Birds of North America," 521  
 Riebeck (Dr. Emil), Chittagong Hill Tribes, 169; Death of, 180; "Chittagong Hill Tribes," Zoology of the Gayal and Gaur, W. T. Blanford, F.R.S., 243  
 Rigid Particles in Contact, on the Dilatancy of Media Composed of, Prof. Osborne Reynolds, 535  
 Riley (Prof.), on *Cicada septendecim*, 253  
 Riley (James), Rise and Progress of the Scotch Steel Trade, 429; an Experimental Cupola Furnace, 430  
 Riveted Joints, Prof. Kennedy on, 21  
 Rivista Scientifico-Industriale, 45, 117, 189, 359, 568, 615  
 Roberts (Prof. Chandler, F.R.S.), on the Development of Technical Instruction in Metallurgy, 608  
 Robin (M.), Death of, 578  
 Robinson (Edward E.) Photographic Action on Ebonite, 626  
 Rock- Round Glasgow, Among the, Dugald Bell, 624  
 Rocky Mountain Region of Canada, on the Mesozoic Floras of the, Sir W. Dawson, F.R.S., 164  
 Roman Sanitary Congress, the, 62  
 Roman Lettering adopted by Japanese Scientific Societies for their Proceedings, 494  
 Romans, the Topography of Italy under the, 376  
 Rome: Reale Accademia dei Lincei, 95, 120; Discovery of Stores of Elephants' Tusks and Lenils in, 279; International Sanitary Conference in, 217  
 Romanes (Dr. Geo. J., F.R.S.), Homing Faculty of Hymenoptera, 630  
 Rookwood (Prof. C. G.), American Earthquakes, 300; Recent Progress in Vulcanology and Seismology, 609  
 Roraima, E. F. in Thurn on the Red Men about, 587  
 Rosse (Lord, F.R.S.), Nebula in Andromeda, 437; the New Star in Andromeda, 465  
 Rotating Vacuum Tube, on Certain Spectral Images Produced by a, Shelford Bidwell, 30  
 Roth (H. Ling), Animal Parasites of the Sugar-Cane, 268  
 Rothamsted, Field Experiments at, Prof. J. Wrightson, 58  
 Rotifers, on the Development of, Miss Pereyaslavtseff, 570  
 Rougerie (Mgr., Bishop of Pamier), the Anemogene, 519  
 Rowan (F. J.), the Iron Trade of Scotland, 429  
 Royal Agricultural Society of England, Journal of, 222  
 Royal Aquarium, Dogfish Ova at, 515  
 Royal Archaeological Institute, the, 252; W. M. Flinders Petrie's Collection of Egyptian Antiquities at, 353  
 Royal Geographical Society: the New President, 11; Anniversary of the, 136  
 Royal Geographical Society of Antwerp, 302  
 Royal Horticultural Society and the Exhibition of Colonial Plants, &c., 278  
 Royal Institute of British Architects, 133  
 Royal Institution, 85  
 Royal Meteorological Society, 23, 118, 190, 287, 552  
 Royal Observatory, Greenwich, Visitation of the, 138  
 Royal Society, 34, 45, 68, 91, 109, 117, 132, 142, 166, 189, 214, 237, 262; New Fellows, 10, 132; *Conversations*, 158  
 Royal Society of Canada, 258  
 Royal Society of New South Wales, 234, 264, 432, 462  
 Ruahine Range, the, New Zealand, 105  
 Rucker (Prof. A. W.), on the Self-Regulation of the Compound Dynamo, 22; Liquid Films, 210  
 Rüdorff (F.), Solubility of Salt Mixtures, 519  
 Rugby School Natural History Society, 62  
 Rule, the Slide, C. V. Boys, 627  
 Rule of Road: George Campbell, M.P., on the Rule of the Road from an Anthropological Point of View, 587  
 Rundschau für Geographie und Statistik, 464  
 Russell (H. C.), on the Rising of the Eastern Coast of Australia, 234  
 Russell (J. Scott, F.R.S.), Wave of Translation in the Oceans of Water, Air, and Ether, 546  
 Russell (Dr. W. J., F.R.S.), Spectroscopic Observations on Dissolved Cobaltous Chloride, 143  
 Russia: Publications of the Russian Geographical Society, 15, 61, 163, 168, 495; *Izvestia* of the, 59; Fauna of Russian Central Asia, Rev. Dr. Henry Lansdell, 56; Industrial Education in, 63; Thunderstorms in, Klossowski, 160; Female Education in, 162; "Russian Central Asia, including Kuldja, Bokhara, Khiva, and Merv," Dr. Henry Lansdell, 194; Devonian System of Russia, 307; Science in Russia, 590  
 Russo-Afghan Boundaries, the, 88  
 Ryan, Prof. John, 514  
 Rye (E. C.), Zoological Record for 1883, 2  
 Rzehak (A.), on the Causes of the Andalusian Earthquakes, 133  
 Sacrificial Stone, an Ancient, of North-West Canada, Jean L'Heureux, 46  
 Sahara, the Artesian Wells in the, 110; Exploration of, Teisserenc de Bart, 164; Lieut. Palat's Mission to the, 302  
 St. Andrews Marine Laboratory, Prof. McIntosh, 563  
 St. John (Charles), "Tour in Sutherlandshire," 355  
 Sakis, the, 428  
 Saline Solutions, Effect of Immersion of Solid Bodies in, J. Thoulet, 87  
 Salmon (George), Lessons Introductory to the Modern Higher Algebra, 411  
 Salmon: in the Thames, Landlocked, 254; Marked, taken in Norway, 300; the Capability of, to Jump Waterfalls, Prof. Landmark, 329; Incubation of Salmon Ova, 609; Hybridisation of Salmonidae at Howietown, Francis Day, 562  
 Salomon (Dr.), Xanthine Bodies in Urine, 496  
 Salt Industry in Cheshire, German Mission to Inquire into, 494  
 Salt Mixtures, Solubility of, F. Rüdorff, 519  
 Salt Production in America, 207  
 Sand, Sonorous, Prof. Bolton, 400  
 Sandhills of Gascony, the, M. Cambrelent, 375  
 Sanitary Conference in Rome, International, 62, 85, 217  
 Sanitary Congress, National, 513  
 Sanitary Institute of Great Britain, 207; Anniversary Meeting, 230; Annual Congress of, 523  
 Saporita (M.) and M. Marion, "L'Evolution du Règne Végétal—Les Phanérogames," J. Starkie Gardner, 289  
 Sarjektjåkko, the Highest Mountain in Sweden, 404  
 Satellites of Uranus and Neptune, 553  
 Saturn, Mars, Jupiter, W. F. Denning, 548  
 Saunders (Edward), "Dead Humble-Bees under Lime-Trees, 427  
 Saunders (Trelawney), Retirement of, 426  
 Schäfer (Dr. E. A., F.R.S.), Mr. Lowne on the Morphology of Insects' Eyes, 3; "Essentials of Histology," Dr. E. Klein, F.R.S., 388  
 Schinz (Dr.), Namaqualand or Namaland, 581  
 Schlagintweit (Robert von), Death of, 133  
 Schlieffmann (Dr. H., F.S.A.), Presentation of Gold Medal of Royal Institute of British Architects to, 133  
 Schmidt (Prof. Friedrich), on the Trilobites of Eastern Siberia, 208  
 School, Indian Forest, Major F. Bailey, 564  
 Schools, Public, Neglect of Science at, Sir John Lubbock, 552  
 Schröter (Dr. J.), "Kryptogamen-Flora von Schlesien," 76  
 Schunck (Edw., F.R.S.), Contributions to the Chemistry of Chlorophyll, 117  
 Schuster (Dr. Max), on Some Results of the Crystallographic Study of Danburite, 556  
 Schwedoff (Prof. Théodore), Red Hail, 437  
 Schweiger (Herr), Baldness among Orientals, 36  
 Schweinfurth (Dr.), Prehistoric Stone Implements of Eastern Egypt, 161  
 Science: Col. Murdoch Smith appointed Director of the Science

- and Art Museum, Edinburgh, 10; Sir John Lubbock on Science, 11; the National Academy of Sciences, 35; Robert Browning as a Scientific Poet, Edward Berdoe, 36; the Common Sense of the Exact Sciences, W. K. Clifford, Prof. P. G. Tait, 124; Science in Jamaica, Morris, 182; Report on the Scientific Results of the Voyage of the *Challenger*, 203, 249; Manual of Health Science, Andrew Wilson, 221; Year-Book of Scientific Societies, 231; Science and Art Department, 237; Manchester and District Association of Science and Art Teachers, 300; Science in Bohemia, 308; a Possible Windfall for Science, 313; Dr. Hyde Clarke, 342; Co-ordination of the Scientific Bureaus of the U.S. Government, 317; the School of Science at South Kensington, 327; Science in Colorado, 330; Science at Marlborough College, 401; "Scientific Culture," Dr. J. P. Cooke, 426; Sir Lyon Playfair on Science and the State, 438; Sir Lyon Playfair on Science and Secondary Education, 439; Sir Lyon Playfair on Science and the Universities, 441; Sir Lyon Playfair on Science and Industry, 442; Public Opinion and State Aid to Science, 497; American Association for the Advancement of Science, 510; Science in Russia, 590; the Present State of Science in Italy, 609; Three Martyrs of Science of the Nineteenth Century, 624; Century of Science in Bengal, 638.
- Slater (Dr. P. L.), "Torresia," a Proposed Name for British New Guinea, 357; "Furculum" or "Furcula," 466.
- Scotland: Union of Scotch Naturalists' Societies, 85; Rise and Progress of the Scotch Steel Trade, James Riley, 429; the Iron Trade of Scotland, F. J. Rowan, 429; Annual Report of the Fishery Board for Scotland for 1884, 281; Pisciculture in Scotland, 298; Geography of Scotland, What has been done for the, and What Remains to be done, H. A. Webster, 565; Scottish Marine Station, J. T. Cunningham, 176; Scottish Meteorological Society, 300, 636.
- Scratching, Spectra Produced in Glass by, E. F. J. Love, 270.
- Sea, on the Depth to which the Sun's Light will Penetrate into the, Fol and Sarasin, 132.
- Sea, Ozone at, Dr. W. J. Black, 416.
- Sea and Air, Observations of the Temperature of the, made during a Voyage from England to the River Plate in the s.s. *Libault*, J. Y. Buchanan, 126.
- Sea-Fisheries, Value of a Marine Laboratory to the Development and Regulation of our, Prof. E. Ray Lankester, F.R.S., 65.
- Sea-Coasts, Erosion, 530.
- Sea-Serpent off Nordland Coast, Rumoured Appearance of the, 462.
- Seabroke (Geo. M.), New Star in Andromeda, 523.
- Seashore, Fauna of the, W. R. Hughes, 294; Arthur R. Hunt, 243, 390; Prof. H. N. Moseley, F.R.S., 212, 417.
- Sebaceous Glands, the Functions of the, Prof. Fritsch, 544.
- Secondary Generators of Messrs. Gaulard and Gibbs at the Inventions Exhibition, 225.
- Sée (Germain), "Bacillary Phthisis of the Lungs," 341.
- Seismological Society of Japan, 299.
- Seismology, Fouqué's Electrical Apparatus for Registering Propagation of Earthquakes, 254.
- Seismology, Recent Progress in, Prof. Rockwood, 609.
- Selenium, the Action of Light in Diminishing the Electrical Resistance of, Shelford Bidwell, 167, 215.
- Self-Induction in Relation to Certain Experiments of Mr. Willoughby Smith and to the Determination of the Ohm, Lord Rayleigh, F.R.S., 7.
- Selwyn (Alfred R. C., F.R.S.), Geological and Natural History Survey of Canada, 242.
- Senex, "Speed" and "Velocity," 78.
- Sense, Common, of the Exact Sciences, W. K. Clifford, Prof. P. G. Tait, 124.
- Sense of Colour, Margaret Heaton, 626.
- Severn Tunnel, Completion of, 460.
- Sewers, Disinfection of, Dr. Italo Giglioli, 415.
- Sexton (Samuel), Value of the Testimony to the Aurora-Sound, 625.
- Shad-Rearing in United States, 112.
- Shallow Seas, Influence of Wave-Currents on the Fauna of, Arthur R. Hunt, 547.
- Shaw (Prof. H. S. Hele): a Self-Recording Stress and Strain Indicator, 70; appointed Professor of Engineering at University College, Liverpool, 279.
- Shell-Work: Miss A. W. Buckland on American Shell-Work and its Affinities, 587.
- Shot-Firing in Mines: W. Galloway, 596; Prof. C. G. Kreischer, 596.
- Shrubsole (W. H.), Foul Water, 223.
- Siam, Silk-Culture in, Archer, 611.
- Siberia, Eastern, Trilobites in, 208.
- Siemens's (Frederick) Gas Lamps, 247.
- Siewers (Carl), Photographing the Aurora Borealis, 29; Translocation of Tromholt's Aurora Borealis, 274.
- Sight, Long, A. Shaw Page, 103.
- Signs, Language of, used by Oriental Traders, J. Menges on, 231.
- Silesian Freshwater Fauna, Dr. O. Zacharias, 160.
- Silk, the Analysis of, Dr. H. A. Bayne, 258.
- Silk-Culture in Siam, Archer, 611.
- Silver-Lead Deposits of Eureka, Nevada, J. S. Curtis, 50.
- Sitzungsberichte der Naturwissenschaftlichen Gesellschaft Isis, 214.
- Skin, the, Dr. Blaschko, 544; Dr. Lassar's Microscopic Preparations of Skin of Lichen Ruber Patient, 544.
- Sky-Glows, 147; Dr. F. A. Forel, 173; Robt. C. Leslie, 245.
- Sleep: Do Fish Sleep?, W. A. Carter, 580.
- Sleepers (Metal), the Question of, 401.
- Slide Rule, C. V. Boys, 627.
- Smell, Physiology of the Sense of, Herr Aronsohn, 520.
- Smith (J. Lawrence), "Original Researches in Mineralogy and Chemistry," 3.
- Smith (Col. Murdoch), appointed Director of the Edinburgh Science and Art Museum, 10.
- Smith (Percy), Causes of Liability of Certain Trees to be Struck by Lightning, 494.
- Smith (Willoughby), Self-Induction in Relation to Certain Experiments of, and to the Determination of the Ohm, Lord Rayleigh, F.R.S., 7.
- Smith (Worthington G.), Hat Circles, 29.
- Smithsonian Institution, 374.
- "Smokeless Houses and Manufactories," Thos. Fletcher, 134.
- Smyrna, Earthquake in, 85.
- Smyth (Prof. C. Piazza), an Earthquake Invention, 213, 625.
- Snow, Milne and, Notes on the Kurile Islands, 135.
- Snow-Storm in Austria, Terrible, 62.
- Society of Arts, 110; Medals of, 181.
- Sohncke (Prof. L.), on the Origin of Thunderstorm Electricity, 406.
- Solar Corona, P. Tacchini's Observations on, 359.
- Solar Eclipses, Central, in New Zealand, 86.
- Solar Maculae, &c., Distribution in Latitude of, Signor Tacchini, 120.
- Solar Radiation, the Recording of the Direct Intensity of, 502.
- Solar Spectrum, New Map of the, L. Thollon, 519.
- Solar Spot, on the Cyclonic Character of the, Faye, 495.
- Sole, Male, is not Unknown, Francis Day, 78.
- Solid Electrolytes, Prof. Silvanus P. Thompson, 366, Shelford Bidwell, 391.
- Solomon Islands, Anthropological Notes on the Natives of, 216.
- Solothurn, Enormous Swarms of Ants at, 515.
- Solubility of Salt Mixtures, F. Rüdorff, 519.
- Solution, B. A. Report on, 529.
- Sorbonne, the New, 328.
- Sorby (H. C., F.R.S.), on the Structure of Iron and Steel, 39.
- Sorensen's (Capt.) Visit to Spitzbergen, 113.
- Soret (J. L.), "Sur le Diapason," 9.
- Soroloff's Analyses of Water of Neva, 13.
- Sound, Fallacy of the Present Theory of, Henry A. Mott, Jun., Dr. W. H. Stone, 75; Transmission of, Prof. W. E. Ayrton, F.R.S., 575.
- South Kensington, the School of Science at, 327.
- Southern Stars, Catalogue of 1000, 636.
- Sowerby's Whale, on Some Points in the Anatomy of, Prof. Turner, 560.
- Spaltplize, die, Dr. W. Zopf, 364.
- Spectra, Researches on the Relation between the Molecular



- Structure of Carbon Compounds and their Absorption, Prof. W. N. Hartley, F.R.S., 93
- Spectra Produced in Glass by Scratching, E. F. J. Love, 270
- Spectral Images Produced by a Rotating Vacuum-Tube, on Certain, Sheldford Bidwell, 30; Dr. Henry Muirhead, 55
- Spectro-Photometer, a New, Dr. König, 191
- Spectroscope, a New Stellar, C. V. Zenger, 543
- Spectroscopic Observations on Dissolved Cobaltous Chloride, Dr. W. J. Russell, F.R.S., 143
- Spectroscopy, Radiant Matter, W. Crookes, F.R.S., and M. Lecoq de Boisbaudran, 283
- Spectrum Analysis: Prof. Thalén on the Lines of Iron, 253; an Advance in the Theory of Spectral Lines, Dr. Kayser, 312; Janssen's Experiments on the Influence of Gases in, 400; Spectral Photometric Researches on Some Photographic Sensitizers, 519; Ultra-Violet Spark Spectra Emitted by Metallic Elements, 529; New Map of the Solar Spectrum, L. Thollon, 519
- Speed and Velocity, 29, 78
- Spermatozooids, Dr. Biondi on the Origin of the, 544
- Spheroidal State of Liquids, the, Luvini, 635
- Spinoza (B. de), Reprint of his Work on the Rainbow, 30
- Spiracle of Fishes in its Relation to the Head as Developed in the Higher Vertebrates, Prof. Cleland, 561
- Spitzbergen, Capt. Sorensen's Visit to, 113
- Sponges, the Australian, R. von Lendenfeld, 639
- Sporer (Dr.), on Whirlwinds, 239
- Sprengel (Dr. H., F.R.S.), the Hell Gate Explosion and Rack-rock, 625
- Square Bamboo, W. T. Thiselton Dyer, F.R.S., 391
- Stadia of the Earth's History, the, M. Faye, 132
- Stairths, Superstitions of the Fishermen at, 541
- Staminody of Petals, J. C. Costerus, 53
- Standard Pitch, 9
- Standards of White Light, Discussion on, 537
- Stanley (Henry M.), the Congo, 154
- Stanley (Sand. S.), Stonehenge, 574
- Stanley (W. F.), a New Form of Protractor and Goniometer, 402; on a Portable Scale of Proportions of Human Body, 586
- Starch in Plants, Notes on Experiments as to the Formation of, under the Influence of the Electric Light, M. Ward, 563
- Stars: Binary, 162; Binary, 70 Ophiuchi, 402; Double Stars, 86, 610; Double-Star 19 (Hav.) Camelopardi, 183; Variable, 554; J. E. Gore, 180; Variable-Star V Cygni, 610; the New Star in Andromeda, 460, 465; Lord Rosse, F.R.S., 465; Dr. William Huggins, F.R.S., 465; W. F. Denning, 465; J. Edmund Clark, 499; A. A. Common, F.R.S., 522; Geo. M. Scabrooke, 523; A. Ricco, 523; Dr. Sophus Tromholt, 579; on the Determination of Time by Corresponding Heights of Different Stars, Prof. Zinger, 63; Application of Photography to Mapping of, Mouchez, 70; Stars with Spectra of the Third Type, 610; Catalogue of 1000 Southern Stars, 636
- State Aid to Science, Public Opinion and, 497
- Statigrams, J. F. Heyes, 597
- Stations, High-Level, Dr. A. Woeikof, 54
- Statistical Society, Jubilee of the, 188
- Statistics, U.S. Industrial, 369
- Stature, Hereditary, Francis Galton, F.R.S., on, 507
- Steam Indicator, Prof. Osborne Reynolds, F.R.S., on the, 137
- Steam Traffic, Direct, between Sea and Cologne, Opening of, 164
- Steel and Iron, on the Structure of, H. C. Sorby, F.R.S., 39
- Steel Trade, Rise and Progress of the Scotch, James Riley, 429
- Stellar Spectroscope, a New, C. V. Zenger, 543
- Sternum in Birds, on the Development of the, Miss Beatrice Lindsay, 540
- Stevenson (D. A.), Earthquake-Proof Buildings, 316
- Steven on (D.A.), and Prof. C. Piazzi Smyth, an Earthquake Invention, 213
- Stevin (Simon), Rare Mathematical Books by, 30
- Stewart (Prof. Balfour, F.R.S.), Radiant Light and Heat, 322, 389, 394, 413, 422, 550
- Stewart (Prof. Balfour, F.R.S.), and W. W. Haldane Gee, Lessons in Elementary Practical Physics, 339
- Stockholm: Zoological Garden in, 110; Academy of Sciences of, 192, 312, 592; Meteor near, 230, 515; Meteorological Phenomena at, 279; After-Sunglow in, 635
- Stokes (Prof. G. G., F.R.S.), Iridescent Crystals of Chlorate of Potash, 224; on Light as a Means of Investigation, Prof. P. G. Tait, 361
- Stokes-Watson Spark Apparatus, 208
- Stone (Dr. W. H.), the Fallacy of the Present Theory of Sound, Henry A. Mott, Jun., 75; International Exhibition, Music Loan Collection, 174
- Stone Age, Articles Discovered at Breonio Veronee, 47; Discovery of a Cemetery of the, 401
- Stone Axes, Perak, A. Hall, 625
- Stone Implements (Pre-historic) of Eastern Egypt, Dr. Schweinfurth, 161
- Stone, Lenape; or, the Indian and the Mammoth, H. C. Mercer, Dr. E. B. Tylor, F.R.S., 593
- Stone Weapons in the Neolithic Age, the Worship of, Prof. Pigorini, 48
- Stonehenge, Meteoric Cycle and, R. Edmonds, 436
- Stonehenge, Sand. S. Stanley, 574
- Stonyhurst College Observatory, 300
- Storms on Atlantic Coast of United States, 427
- Straits Settlements, Timbers of the, Howard Newton, 160
- Strain Indicator, a Self-Recording, Prof. H. S. Hele Shaw, 70
- Strasbourg Scientific Congress, 493
- Strawberry, a Quinquefoliate, E. Lewis Sturtevant, 126
- Stream-Lines of Moving Vortex-Kings, Prof. Lodge, 263
- Stretched India-rubber, on the Behaviour of, H. G. Madan, 625
- Stroumbi (D. S.), Experiments on Double Refraction, 432
- Struthers (Prof.), on the Development of the Vertebrae of the Elephant, 560; on the Development of the Foot of the Horse, 560; on the Cervical Vertebrae of the Greenland Right-Whale, 560; on the Tay Whale (*Megaptera longimana*) and other Whales, 560
- Sturtevant (E. Lewis), a Quinquefoliate Strawberry, 126
- Styria, Earthquake in, 231, 428
- Sub-Lacustrine Ravines of Glacial Streams, F. A. Forel, 640
- Sugar Cane, Animal Parasites of the, H. Ling Roth, 268
- Sulphur, Atomic Refraction of, in Various Compounds, Nasini, 87
- Sulphurous Acid in Town Atmospheres, M. G. Witz, 144
- Sumac in South Australia, Cultivation of, 462
- Sun, on the Hydrogeic Protuberances of the, Prof. Tacchini, 48
- Sun, Recent Total Eclipse of the, 631
- Sun's Light, on the Depth to which it will Penetrate into the Sea, Fol and Sarasin, 132
- Sun-Glows—Time—Thunderbolts—Vision, Antoine d'Abbadie, 29
- Sunlight and the Earth's Atmosphere, S. P. Langley, 17, 40
- Sunsets, R. McLachlan, F.R.S., 437; Red Rays after, Geo. F. Burder, 466; a Remarkable, Paul A. Cobbold, 626; Prof. Kiessling's Investigations into the Origin of the Late Sunset Glows, J. Edmund Clark, 637
- Sunspots, Tacchini's Observations of, 144
- Superstitions of the Stair Fishermen, 541
- Sur l'Origine du Monde, M. Faye, 132
- Surface-Tensions of Liquids, on Calculating the, by Means of Cylindrical Drops or Bubbles, Prof. Pirie, 536
- Surface Tension of Water which contains a Gas Dissolved in it, Prof. Pirie, 536
- Surinam, Dr. Ten Kate's Expedition to, 164
- Surinam River, Dutch Expedition to, 356
- Sutherland (William), Terminology of the Mathematical Theory of Electricity, 391
- Swallows: Migration of, 161; a Query as to, 197; Wm. Watts, 223; a White Swallow, Mary Briggs, 500
- Sweden: Geographical Education in, 15; Forest Cultivation from Seeds in, 230; the Herring Fisheries of, 230; Mirage in, 231, 541, 552; Mirage on Lake Wetteren, 279; Cyclones in, 355; Fossil Forests in, 402; the Highest Mountain in, 404; Early Departure of Migratory Birds, 427

- Switzerland: Prehistoric Remains in, 84; Recent Earthquake in, F. A. Forel, 295; Meteorology in, 426
- Sword, on the Japanese, Herr Hütterott, 635
- Sydney, New South Wales: Linnean Society, 238; MacLeay Fellowships at the University of, 230
- Sylvester (Prof. J. J., F.R.S.), on a New Example of the Use of the Infinite and Imaginary in the Service of the Finite and Real, 103, 271; on Certain New Terms, or Terms used in a New or Unusual Sense in Elementary Universal Geometry, 576
- Symons (G. J., F.R.S.), on Trees Struck by Lightning in Richmond Park, 460; "British Rainfall for 1884," 463
- Tacchini (Prof. P.), on the Hydrogenic Protuberances of the Sun, 48; Distribution in Latitude of Solar Maculae, 120; Observations of Sunspots, 144; Solar Observations in 1885, 359; Observations of the Solar Corona made on Mount Etna, 359
- Tait (Prof. P. G.), W. K. Clifford's "Common Sense of the Exact Sciences," 124, 196; Prof. Clifford, 173; "Properties of Matter," Lord Rayleigh, F.R.S., 314; Prof. G. G. Stokes on Light as a Means of Investigation, 361
- Tar and Ammonia from Blast Furnaces Fed with Raw Coal, the Recovery of, Wm. Jones, 430
- Tasmania, Fish-Culture in, Saville Kent, 634
- Taste, New Theory of the Sense of, Prof. J. Berry Haycraft, 562
- Tattooing, Japanese, 566
- Taylor (Dr. Wallace), Discoveries as to the Origin of Kakké Disease, 330
- Taylor (W. C.), an Agricultural Note-Book, 623
- Teaching University for London, 255
- Technology, Report of Examinations in, 328
- Technical Education, 328
- Teeth, Artificial, Use of, by the Ancient Romans, 13
- Teeth, Human, Anomalies of Structure in, Prof. Busch, 71
- Telegraph Conference, International, at Berlin, 253, 353
- Telegraph Lines in Corea, Proposed, 427
- Telegraphic Perturbations, a Yearly and a Daily Period in, Dr. Sophus Tromholt, 88
- Telephone, a Mechanical, 298; W. J. Millar, 316
- Telescope, on a Monochromatic, Lord Rayleigh, 22
- Telescope Dome, Bischoffsheim's Floating, for Nice Observatory, 62
- Tempel's Comet (1867 II.), 37, 356
- Tempel-Swift Comet (1869-80), 112
- Temperatures, Polar, Record of Lena, 16
- Temperature of Water in Firth of Forth, H. R. Mill, 70
- Temperature of the Sea and Air, Observations of the, made during a Voyage from England to the River Plate in the s.s. *Lebnitz*, J. Y. Buchanan, 126
- Temperature-Sense, Donaldson's Observations on, 110
- Temperature of Human Body, on the Influence of Cortex Cerebri on, Prof. Eulenburg, 496
- Temperature of the Austrian Alps, the, Dr. Hann, 580
- Temperature, Underground, 503
- Temperature, on the Sequence of Mean, and Rainfall in the Climate of London, Dr. Courtney Fox, 536
- Temperature, Low, on Night of August 31-September 1, Unprecedented, 495
- Teneriffe, Earthquake in, 300
- Ten Kate (Dr. H. Z. C.), Expedition to Surinam, 164; "Reizen en Onderzoekingen in Noord-Amerika," Dr. E. B. Tylor, F.R.S., 593
- Terminology of the Mathematical Theory of Elasticity, W. J. Ibbetson, 76; William Sutherland, 391; Henry Muirhead, 437
- Terms, on Certain New, or Terms used in a New or Unusual Sense in Elementary Universal Geometry, Prof. J. J. Sylvester, F.R.S., 576
- Tertiary Man, M. de Mortillet, 494
- Tertiary Rainbow, T. C. Lewis, 523, 626
- Testimony to the Aurora-Sound, Value of the, Samuel Sexton, 625
- Thalen (Prof.), the Lines of Iron, 253
- Thames, Landlocked Salmon in the, 254
- Theiler's Microscopes, 112
- Theodolites, Cloud-Measurement by, 400
- Theory of Light, Electro-Magnetic, Sir Wm. Thomson and Maxwell's, Prof. Geo. Fras. Fitzgerald, 4
- Theory of Sound, Fallacy of the Present, Henry A. Mott, Jun., Dr. W. H. Stone, 75
- Therapeutics, and Materia Medica, Text-Book of Pharmacology, Dr. T. Lauder Brunton, F.R.S., Prof. Arthur Gamgee, F.R.S., 337
- Thermic Studies of the Aromatic Series, Berthelot, 592
- Thermo-Chemistry to Explanation of Geological Phenomena, Application of, Dieulafoy, 592
- Thermo-Electric Position of Carbon, J. Buchanan, 263
- Thermometer, a Differential Resistance, T. C. Mendenhall, 567
- Thermopiles, on the Thermodynamic Efficiency of, Lord Rayleigh, F.R.S., 536
- Thibet Expedition, Col. Prievalsky's, 493
- Third International Geological Congress, 599
- Thollon's (L.) New Map of the Solar Spectrum, 519
- Thomp-on (D'Arcy W.), Systematic Position of the Chamaeleon and its Affinities with the Dinosauria, 562
- Thompson (Isaac C.), "Foul Water," 271
- Thompson (Prof. Sylvanus P.), Rainbow Phenomena, 54; on a Model illustrating the Propagation of the Electro-Magnetic Wave, 70; Solid Electrolytes, 366
- Thomson (Sir Wm., F.R.S.), and Maxwell's Electro-Magnetic Theory of Light, Prof. Geo. Fras. Fitzgerald, 4; "Mathematical and Physical Papers," Prof. Helmholtz, F.R.S., 25; on Constant Gravitational Instruments, 535
- Thoroddsen (T.), a Lava Desert in the Interior of Iceland, 554
- Thouar's Journey in Search of the Crévaux Expedition, 14
- Thought, Pre-Existence and Post-Existence of, Dr. Hyde Clarke, 102
- Thoulet (J.), Effect of Immersion of Solid Bodies in Saline Solutions, 87
- Thuillier (Dr.), Monument to, 230
- Thunderbolts—Time—Vision—Sunglows, Antoine d'Abbadie, 29
- Thunderstorm in Paris, Terrific, 85; in Russia, Klossowki, 160; of August 6, 1885, on a Remarkable Occurrence during the, W. H. Preece, F.R.S., 536; Thunderstorms and Air Pressure, W. Allen Hazen, 181; on the Origin of Thunderstorm Electricity, Prof. L. Sohncke, 406
- Thyroid Gland, on the Development of the, Herr Pischelis, 496
- Tidal Observations in Canada, 503
- Tidal Observations, the Harmonic Observation of, 503
- Tidal Streams, the Action on Metals of, (Gravimetric), Thos. Andrews, 189
- Timbers of the Straits Settlements, Howard Newton, 160
- Time, the Question of Civil and Astronomical, 245
- Time—Thunderbolts—Vision—Sunglows, Antoine d'Abbadie, 29
- Timiriazoff (C.), Colourless Chlorophyll, 342
- Tissandier (Gaston), Balloon Ascent for Photographic Purposes, 182
- Tonquin, Eccentricities of European Nomenclature of, 15; Travels in, 554
- Topinard (Dr. P.), Anthropometric Instructions for Travellers, 615
- Topography of the Pamir Region, Kosyakoff, 163
- Topography of Italy under the Romans, the, 376
- Torpelo marmata*, Occurrence of, off the Coast of Cornwall, Francis Day, 197
- "Torresia," Proposed Name for British New Guinea, 357
- Traquair (Dr. R. H., F.R.S.), a Preliminary Note on a New Fossil Reptile recently discovered at Spynie, near Elgin, 556
- Traill (George William), "Monograph of the Algæ of the Firth of Forth," 101
- Traill (Thos. W.), Chain Cables and Chains, 572
- Trans-Alay, Fauna of, 335
- Translation, Wave of, in the Oceans of Water, Air, and Ether, J. Scott Russell, F.R.S., 546
- Transmission of Sound, Prof. W. E. Ayrton, F.R.S., 575
- Transvaal Gold Fields, the Geology of the, W. H. Penning, 190
- Trécul, on Bochefontaine's Experiment on Origin of Cholera, 496

- Trees, Causes of Liability to be Struck by Lightning of Certain, Percy Smith, 494
- Tremble-terre du 26 Septembre, 1885, Prof. F. A. Forel, 574
- Tresca (Henri), Death of, 181
- Trewendt's "Encyklopädie der Naturwissenschaften," 515
- Triassic Sandstone of Elgin, Presence of the Remains of Diconodon in the, Prof. J. W. Judd, F.R.S., 572
- Trigonometrical Survey of India, on Levelling Operations of the Great, Major A. W. Baird, 536
- Trilobites in Eastern Siberia, 208
- Trimen (Dr.), Catalogue of the Flowering Plants and Ferns of Ceylon, 354
- Tromholt (Dr. Sophus), a Yearly and a Daily Period in 'Telegraphic Perturbations, 88; a Note Relating to the History of the Aurora Borealis, 89; the Aurora, 274, 348; Norwegian Testimony to the Aurora-Sound, 499; the New Star in Andromeda, 579
- Trondhjem, Hugh Miller on Some Results of a Detached Survey of the Old Coast Lines near, 555
- Trotter (Countess), Recent Explorations in New Guinea, 611
- Trout, Young, Destruction by Mosquitoes of, 515
- Trowbridge (J.), a Standard of Light, 568
- Truth, Guessings at, 152
- Tschermak (Dr. Gustav), "Lehrbuch der Mineralogie," 3
- Tube, Rotating Vacuum, on Certain Spectral Images Produced by a, Shelford Bidwell, 30
- Tuberculosis of the Vine, L. de A. Corvo, 496
- Tucker (R.), on the late Prof. Clifford's Papers and MS., 4; Prof. Clifford's Kinetic, 147
- Tuckwell (Rev. W.), "Life of Frank Buckland," George Bompas, 385
- Tumuli at Geinberg in Austria, 355
- Tunis: Education in, 134; the Water-Supply of the Desert of, 281
- Turner (Prof. W.), on Some Points in the Anatomy of Sowerby's Whale, 560; on the Index of the Pelvic Brim as a Basis of Classification, 586
- Tuttle's Comet, 13, 280, 301, 402
- Twilight, J. Kiessling, 321
- Two Generalisations, W. M. Flinders Petrie, 597
- Tycho's Nova of 1572, 162
- Tylor (Prof. E. B., F.R.S.), American Anthropology, 593
- Tyndall (Prof. F.R.S.), his Lectures in the United States, 207
- Typoons: Characteristics of, 329; M. Faye on, 408; Average Velocities of, 463
- Tyrolese Alps, New Meteorological Station on, 133
- Ultra-Violet Spark Spectra Emitted by Metallic Elements, 529
- Unconscious Bias in Walking, Manly Miles, 293
- "Under the Rays of the Aurora Borealis," S. Tromholt, 274
- Underground Temperature, 503
- United States: Harvard College Observatory, 37; Commission of Fish and Fisheries for 1881-82, Reports of, J. T. Cunningham, 79; Shad-Rearing in, 112; Meteorology in, 181; Co-ordination of the Scientific Bureaus of the U.S. Government, 317; Cyclones in, 328; Economic Ornithology in, 329; Mineral Resources of the, A. Williams, 341; U.S. Industrial Statistics, 369; Mineral Products of the United States, 404; Storm on Atlantic Coast of, 427; Ornithology in, 461; Acclimatisation of Flat Fish in, 514; Education in the, 518; Agricultural Grasses of the, Dr. Geo. Vasey, Prof. W. Fream, 525; United States Coast and the Geodetic Survey, 572
- Universal Gallery of the British Museum, Guide to the, (Natural History), L. Fletcher, 364
- Universal Meridian, Dr. Janssen, 148, 200
- University College, Professorship of Electrical Engineering at, 253
- University College, Liverpool, 159
- University College of North Wales, Calendar of, 608
- University Intelligence, 21, 44, 90, 116, 141, 165, 188, 237, 309, 357, 407, 543, 614, 639
- University of London, 289; New Departure for the, 265
- University of Lund, 112
- University, a Teaching, for London, 255
- University, a Model, 367
- University of Virginia, 134
- Universities and Science, Sir Lyon Playfair on, 441
- Unthinkable, the, Signor Bonatelli, 120
- Upsala, Society of Science, 72; Collection of Eggs at the University of, 280
- Uranus and Neptune, Satellites of, 553
- Urine, Xanthine Bodies in, Dr. Salomon, 496
- Vacuum-Tube, Rotating, on Certain Spectral Images produced by a, Shelford Bidwell, 30
- Value of the Testimony to the Aurora-Sound, Samuel Sexton, 625
- Variable Stars, 554; J. E. Gore, 180; V Cygni, 610
- Vasey (Dr. Geo.), "Agricultural Grasses of the United States," Prof. W. Fream, 525
- Vasomotor Centre in Cortex of Cerebrum, a, Dr. Raudnitz, 119
- Vaux (W. S. W., F.R.S.), Death of, 181
- Vegetable Substances, Guide for the Microscopical Investigation of, Dr. W. J. Behrens, 193
- Vegetation, Evolution of, J. Clayton, 223
- Vegetation of the Earth, A. Grisebach, W. Botting Hemsley, 315; Dr. W. Engelmann, 366
- Veins, Pulsation in the, 437; J. Hippisley, 389; Dr. J. W. Williams, 466
- Velocity of Light, M. Wolf's Modification of Foucault's Apparatus for the Measurement of the, Albert A. Michelson, 6
- Velocity, Speed and, 29; Senex, 78
- Venus, the Transit of, 1882, Belgian Observations in Texas, 254
- Verein für Naturkunde zu Mannheim, 463
- Verhandlungen des Vereins für Naturwissenschaftliche Unterhaltung in Hamburg, 111
- Verhandlungen der Gesellschaft für Erdkunde zu Berlin, 376
- Verrill (Prof.), Longevity of Oysters out of Water, 494
- Vertebrae, on the Development of the, of the Elephant, Prof. Struthers, 560
- Vesuvius, Eruption of, 11; the New Outburst of Lava from, H. J. Johnston-Lavis, 55, 108; Volcanic Phenomena of, 505
- Vesta, Occultations of, 355
- Veth (Dr. D.), Death of, 403
- Victoria Hall Science Lectures, 514; Penny Science Lectures at the, 609
- Vienna: Imperial Academy of Sciences, 24, 72, 192, 520; Geographical Society of, 429; Mittheilungen of the Geographical Society of, 356
- Vincennes, Emigration of Eels at, 111
- Vine, Tuberculosis of the, L. de A. Corvo, 496
- Vines (Sydney H.) and F. O. Bower, "A Course of Practical Instruction in Botany," 73
- Vipan's (Capt.) Aquarium of Foreign Fishes at Wansford, 541
- Virchow (Dr. H.), the Eye of the Frog, 519
- Virginia, University of, McCormick Observatory, 13
- Viscera of *Gymnotus electricus*, Prof. Cleland, 561
- Viscosity of Ice, Some Experiments on, Prof. C. Lloyd Morgan, 16
- Vision—Time—Thunderbolts—Sunglows, Antoine d'Abbadie, 29
- Visitation of the Royal Observatory, Greenwich, 138
- Vivisection, 141
- Volcanoes: Volcanic Activity in Java, 401; Volcanic Phenomena of Vesuvius, 11, 506; Threatening State of Krakatōa, 161; the Recent Volcanic Eruptions in Java, 181; Eruption of Cotopaxi, 375, 428
- Voltaic Cell with a Solid Electrolyte, Shelford Bidwell, 345
- Voltmeters, on the Winding of, Profs. Ayrton and Perry, 215
- Volumetric Analysis for Testing Bioxides of Manganese, Paul Charpentier, 359
- Vortex Atom Theory, on the Constitution of the Luminiferous Ether and the, Prof. W. M. Hicks, 537
- Vortex-Rings, Prof. Lodge on Stream-Lines of Moving, 263

- Vuibert's Journal de Mathématiques Élémentaires, 609  
 Vulcanology and Seismology, Recent Progress in, Prof. Rockwood, 609
- Wales, Fire at University College, 254  
 Walker (Alf. O.), Rainfall of N.W. England, 271  
 Walker (General J. T., F.R.S.), Opening Address in Section E (Geography), at the British Association, 481  
 Walking, Unconscious Bias in, Manly Miles, 293  
 Wallace (Alfred R.), "A Naturalist's Wanderings in the Eastern Archipelago," Henry O. Forbes, 218  
 Wansford, Capt. Vipan's Aquarium of Foreign Fishes at, 541  
 Ward (M.), Notes on Experiments as to the Formation of Starch in Plants under the Influence of the Electric Light, 563  
 Warren (Wm. F., LL.D.), "Paradise Found," 28  
 Warrand (Col. Wm. E.), Black and White, 245  
 Washington Hydrographical Bureau, 110  
 Washington Philosophical Society, 300  
 Water in Firth of Forth, Temperature of, H. R. Mill, 70  
 Water, the Removal of Micro-Organisms from, P. F. Frankland, 262  
 Water, Foul, W. H. Shrubsole, 223; Herbert C. Chadwick, 245; Isaac C. Thompson, 271  
 Water, Monkeys and, Jerry Barrett, 367  
 Water-Birds of North America, Prof. S. F. Baird, Dr. T. M. Brewer, and R. Ridgway, 521  
 Water-Supply, Report of Committee on Decrease of, 23  
 Watering the Coal-Dust in Mines, W. Galloway, 171  
 Waterspouts in Mexico and Alsace, 133, 134  
 Watson (W.), Pitcher Plants, 341; a Correction, 367  
 Watt (Alex.), "History of a Lump of Gold from the Mine to the Mint," 340  
 Watt (J. B. A.), Electrical Phenomenon, 316  
 Watts (Henry) Fund, the, 61  
 Watts (Wm.), Swallows, 223  
 Watts (W. W.), the Geology of the Breidden Hills, 310  
 Wave of Translation in the Oceans of Water, Air, and Ether, J. Scott Russell, F.R.S., 546  
 Wave-Currents, Influence of, on the Fauna of Shallow Seas, Arthur R. Hunt, 547  
 Waves, Ocean, Measurements of, 110  
 Wax, Chinese Insect White, A. Hosie, 562  
 Weather: Cyclones in United States, 328; Rainy Summer in Eastern Asia, 461; Unprecedented Fall of Temperature on Night of August 31-September 1, 495; Inclement Weather in Iceland and Norway, 427, 542; Forecasting by Means of Weather Charts, 392  
 Webb (Rev. T. W.), Death of, 84; Obituary Notice of, G. F. Chambers, 126  
 Webster (H. A.), What has been done for the Geography of Scotland, and what remains to be done, 565  
 Wedding (Dr. Hermann), on the Properties of Malleable Iron, 40  
 Weights and Measures Act, Proceedings under the, 634  
 Weiss (Prof.), on the Present State of Computations of Orbits of Comets, 516  
 Weissmann (Lieut.), Discovery of Fall of Kassai River into Lake Leopold II., by, 495, 554, 581  
 Weldon (Walter, F.R.S.), Death of, 552  
 Wellington College Natural Science Society, 208  
 Welsbach (Dr. C. A. von), the "Decomposition" of Didymium, 435  
 Wernicke's (Dr.), Experiments on the Reflection of Light, 312  
 Wesson (Edward), Niagara Falls: the Rate at which they Recede Southwards, 229  
 West Kent Natural History, Microscopical, and Photographic Society, 402  
 Western Islands?, Are there Rabbits in the, Herbert Ellis, 575  
 Weyl (Dr.), Nitrates in Human Body, 191; Cholesterin, 544  
 Whale, Rudolphi's, Observations on, Dr. R. Collett, 374; on the Cervical Vertebrae of the Greenland Right, Prof. Struthers, 560; on Some Points in the Anatomy of Sowerby's, Prof. Turner, 560; on the Tay Whale and Others Recently Obtained in the District, Prof. Struthers, 560
- Wheat, Experiments to Ascertain most Productive Variety of, P. P. Dehérain, 496  
 Wheat Production in India, Prof. John Wrightson, 79  
 Whirlwinds, Prof. Spörer on, 239  
 Whitaker (W.), on Deep Boring at Chatham—a Contribution to the Deep-Seated Geology of the London Basin, 555  
 White, Black and, Col. Wm. E. Warrand, 245  
 White Light, B. A. Report on Standards of, 529; Discussion on Standards of, 537  
 White Swallow, a, Mary Briggs, 500; Alex. Anderson, 523; Hubert Airy, 523; J. L. Bozward, 523  
 Whitechapel Fine Art Exhibition, 160  
 Whitefish, Acclimatisation of, 85, 402, 515  
 Whitehouse (Cope), Projected Restoration of the Reian Moeris, and the Province, Lake, and Canals ascribed to the Patriarch Joseph, 565  
 Wild-Bees, E. Brown, 6  
 Will, Motor Centres of the Brain and the Mechanism of the, Victor Horsley, 377  
 Williams (A.), Mineral Resources of the United States, 341  
 Williams (Dr. J. W.), Pulsation in the Veins, 466  
 Williams College, Lyceum of Natural History, 12  
 Williamson (Prof. W. C., F.R.S.), Evolution of Phanerogams, 364  
 Willoughby (Edward F.), Hygiene, 221  
 Wilson (Dr. D.), on the Manifestation of the Aesthetic Faculty among Primitive Races, 250  
 Wilson (Thomas), on a New Man of Mentone, 588  
 Wimshurst Induction Machine, Notes on the Action of the, G. B. Buckton, F.R.S., 51  
 Wind in Fertilisation, the Role of, M. Alluard, 134  
 Wind Currents, Upper, over the Equator, Hon. Ralph Abercromby, 624  
 Windfall, Possible, for Science, Dr. Hyde Clarke, 313, 342  
 Wingless Birds, Dr. H. Woodward, F.R.S., 46  
 Wires, on Cooling of, in Air and Vacuum, J. T. Bottomley, 536  
 Witz (M. G.), Sulphurous Acid in Town Atmospheres, 144  
 Woeikof's "Climates of the Globe," 11; High-Level Meteorological Stations, 54  
 Wolf's (M.), Modification of Foucault's Apparatus for the Measurement of the Velocity of Light, Albert A. Michelson, 6  
 Women Students at Zurich, 635  
 Woodpeckers Nesting in Ants' Nests, 52  
 Woodward (Dr. H., F.R.S.), Wingless Birds, 46; Testimonial to, 84, 252  
 Wool-Fibre, Structure of the, in its Relation to the Use of Wool for Technical Purposes, Dr. F. H. Bowman, 266  
 Worsaae (Prof.), Death of, 375  
 Wortley (Col. H. Stuart), Resting Position of Oysters, 625  
 Wrightson (Prof. John): Field Experiments at Rothamsted, 58; Wheat-Production in India, 79; Bulletin of the Bussey Institution, 195; British Dairy Farming, James Long, 571  
 Wyoming, the Deinocerata of, Prof. O. C. Marsh, Arch. Geikie, F.R.S., 97
- Xanthine Bodies in Urine, Dr. Salomon, 495
- Yarrell's (William) History of British Birds, New Edition of, 363  
 Year-Book of Scientific and Learned Societies for 1885, 231  
 Yolland (Col., F.R.S.), Death and Obituary Notice of, 461  
 Yoshida (Hikokuro), the Chemistry of Japanese Lacquer, 190
- Zacharias (Dr. O.), Silesian Freshwater Fauna, 160  
 Zeitschrift der Gesellschaft für Erdkunde zu Berlin, 403  
 Zeitschrift für Wissenschaftliche Zoologie, 91, 591  
 Zenger (C. V.), a New Stellar Spectroscope, 543  
 Zinger (Prof.), on the Determination of Time by Corresponding Heights of Different Stars, 63  
 Zoological Gardens, Additions to, 13, 37, 63, 85, 112, 134, 162, 183, 209, 231, 254, 330, 355, 376, 402, 428, 463, 495, 516, 542, 552, 581, 609, 636



Zoological Garden for Christiania, 553  
 Zoological Garden in Stockholm, 110  
 Zoological Exploration of the Indian Seas, 35  
 Zoological Laboratory, the Chesapeake, 400  
 Zoological Record for 1883, 2  
 Zoological Research, 43  
 Zoological Society, 46, 118, 143, 238  
 Zoological Society of Philadelphia, 85  
 Zoological Station at Naples, 505

Zoological Subjects, Davis Lectures on, 132  
 Zoology: Prof. Gill's Account of Progress in, 85; Elementary  
 Text-Book of, Dr. C. Claus, 122; of Dr. Riebeck's "Chittagong Hill Tribes"—the Gayal and Gaur, W. T. Blanford, F.R.S., 243; a New Frugivorous Bat, 374; Miss Pereyaslovskoff on the Development of Rotifers, 579  
 Zopf (Dr. W.), die Spaltpilze, 364  
 Zöppritz (Dr.), Death of, 14  
 Zurich University, Women Students at, 635